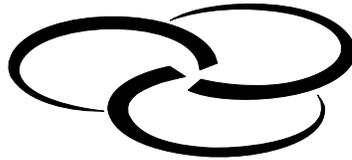


**RENEWABLE ENERGY PROGRAM**

**2006 ANNUAL REPORT  
TO THE LEGISLATURE**



*RENEWABLE  
ENERGY  
PROGRAM*

**COMMITTEE REPORT**

November 2006  
CEC-300-2006-018-CTF



Arnold Schwarzenegger, Governor

**CALIFORNIA ENERGY COMMISSION**

1516 NINTH STREET  
SACRAMENTO, CA 95814-5512  
www.energy.ca.gov



November 1, 2006

Members of the Senate Energy, Utilities and Communications Committee  
Members of the Senate Budget and Fiscal Review Committee  
Members of the Senate Appropriations Committee  
Members of the Assembly Utilities and Commerce Committee  
Members of the Assembly Budget Committee  
Members of the Assembly Appropriations Committee  
California State Capitol Building  
Sacramento, California 95814

Re: Renewable Energy Program *2006 Annual Report to the Legislature*

Honorable Members:

The California Energy Commission (Energy Commission) is pleased to submit the *Renewable Energy Program 2006 Annual Report to the Legislature (2006 Annual Report)* that includes descriptions of projects awarded funding in the prior year. Accordingly, enclosed are the *2006 Annual Report* and its associated *Appendix*, covering the period July 1, 2005 through June 30, 2006. The *2006 Annual Report* includes information on the fiscal and functional aspects of the Renewable Energy Program: allocation of Renewable Resource Trust Fund dollars, information on cash flow, program activities and results, and projects and funding awards. The *Appendix* contains detailed project descriptions, statistics, and financial data.

As reflected in the report, the Energy Commission continues to further the growth of the renewable energy industry, expanding the amount of electricity derived from renewable energy sources and fostering a sustainable market. These objectives, in turn, provide California's residents with cleaner air, price stability, increased fuel diversity, energy security, and new employment opportunities.

**Renewables Portfolio Standard (RPS)**

The Energy Commission and the California Public Utilities Commission (CPUC) continue to work collaboratively to design and implement the RPS. The RPS requires retail sellers of electricity to increase their procurement of renewable energy by at least 1 percent per year, with a target of 20 percent renewables by 2010. The Energy Commission has adopted guidelines governing the RPS eligibility of in-state and out-of-state renewable energy facilities as well as the eligibility for supplemental energy payments (SEPs). SEPs may be paid to eligible facilities for the above-market costs of

renewable energy procured to meet the RPS requirements. As of June 30, 2006, the Energy Commission has certified 503 facilities as eligible for the RPS, representing 8,170 megawatts (MW).

Along with developing the RPS implementation guidelines, the Energy Commission is designing a renewable energy tracking and verification system known as the Western Renewable Energy Generation Information System (WREGIS) to address long-term RPS tracking needs. The Western Electricity Coordinating Council will act as the institutional home of the WREGIS and provide the necessary staff to develop and administer the program. The Energy Commission estimates that the WREGIS will be operational by mid 2007.

### **New Renewable Facilities Program**

The New Renewable Facilities Program supports the development of new in-state renewable electricity generating facilities. Initially, the Energy Commission provided production incentives to new renewable generating facilities that were awarded through an auction process. The Energy Commission has paid more than \$62 million to 46 projects. Of the 68 active projects that won funding awards, 47 projects are online representing 488 MW of capacity (1 online project has not started collecting payments). When completed, winning projects from the auctions will bring 1,237 MW of renewables capacity to California's electricity grid.

With the advent of the RPS, the New Renewable Facilities Program will now award funding in the form of SEPs through competitive RPS solicitations rather than through auctions. New renewable facilities that meet specific eligibility requirements may receive SEPs that will be paid for each kilowatt-hour of eligible electricity they generate. As of June 30, 2006, the Energy Commission had not received any complete applications for SEPs. However, staff expects to receive at least two complete applications in the near future, and the probability of numerous additional applications resulting from the 2005 and 2006 utility RPS solicitations remains high.

### **Existing Renewable Facilities Program**

The Existing Renewable Facilities Program provides funding in the form of production incentives to support existing renewable facilities while transitioning to a competitive market for their renewable energy products. As of June 30, 2006, the Energy Commission has made payments to existing renewable facilities totaling over \$230 million for more than 66,087 GWh of generation. Payments for fiscal year 2005-2006 totaled \$20.8 million on 4,071 GWh of generation submitted.

## **Emerging Renewables Program**

The Emerging Renewables Program provides rebates and production incentives to end-use consumers who purchase and install renewable energy technologies, primarily solar photovoltaic and small wind systems, for on-site generation. During fiscal year 2005-2006, the Energy Commission paid \$74.6 million to rebate applicants for over 5,600 completed projects. These projects represent 25.8 MW of generating capacity from photovoltaic and wind systems. As of June 30, 2006, more than 19,400 emerging renewable systems have been installed with \$285 million in support from the Energy Commission, representing approximately 81 MW of distributed renewable electricity capacity. An additional 3,779 systems held rebate reservations totaling over 23.6 MW of solar and wind capacity in various stages of completion, accounting for \$67.9 million.

The Energy Commission has been working collaboratively with the CPUC to prepare for the January 1, 2007, launch date of the California Solar Initiative (CSI), a \$3.35 billion solar incentive program. The CSI has a goal of 3,000 MW of installed solar capacity by 2017 and will replace the solar components of both the Emerging Renewables Program and the CPUC's Self-Generation Incentive Program. The CPUC will be responsible for incentives to the commercial and existing residential markets and the Energy Commission will encourage solar installations and adopt energy efficiency measures in the residential new construction market.

## **Consumer Education Program**

The Consumer Education Program increases public awareness of the benefits of renewable energy and options to adopt it, and encourages purchases of renewable energy technologies through information dissemination and demonstration projects. These include information, products and processes that add consumer value to renewable energy.

Since 1999, consumers statewide have received information about renewable energy and its benefits via public service announcements, events, radio and television, newspaper and magazine articles. The Consumer Education Program has expended, encumbered, or committed over \$14 million to support three public awareness campaigns funded through contracts; 21 grant projects awarded for renewable energy information and outreach activities; the development of the WREGIS; and other Consumer Education activities promoting renewable energy.

November 1, 2006

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The Renewable Energy Program will continue its efforts to achieve a fully-competitive and self-sustaining renewable energy supply for the State of California. Partnered with California's long history of support for renewable energy, the program is committed to advancing its pursuit of investments in renewable resources and technologies.

The *2006 Annual Report to the Legislature and Appendix* can be accessed on the Energy Commission's Web site at [[www.energy.ca.gov](http://www.energy.ca.gov)]. A print copy is available by calling (916) 654-5200.

Should you have any questions or comments concerning this report, please contact Mike Smith, Director of Governmental Affairs for the Energy Commission, at (916) 654-4942.

Respectfully submitted,



JOHN L. GEESMAN  
Commissioner and Presiding Member  
Renewables Committee



JACKALYNE PFANNENSTIEL  
Chairman and Associate Member  
Renewables Committee

Enclosure

cc: California Legislative Analyst's Office

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# ABSTRACT

The *2006 Annual Report to the Legislature (Annual Report)* and *Appendix* respond to a legislative directive to report annually on the results of the Renewable Energy Program's activities and status of funding. The comprehensive *Annual Report* covers the period of July 1, 2005 through June 30, 2006, and includes information on the following fiscal and functional aspects of the Renewable Energy Program: allocation of Renewable Resource Trust Fund dollars, information on cash flow, program activities and results, and projects and funding awards. The *Appendix* contains detailed project descriptions, statistics, and financial data.

# KEY WORDS

Renewable Energy Program, Renewable Resource Trust Fund, Investment Plan, Renewables Portfolio Standard, supplemental energy payments, market price referent, Western Renewable Energy Generation Information System, New Renewable Facilities Program, Existing Renewable Facilities Program, Emerging Renewables Program, Consumer Education Program, Customer Credit Program, California Solar Initiative, New Solar Homes Partnership, renewable energy, solar thermal, photovoltaic, biomass, fuel cell, geothermal, wind energy, distributed generation

# INTRODUCTION

The California Energy Commission (Energy Commission) is pleased to submit its *2006 Annual Report to the Legislature (2006 Annual Report)*, covering the Renewable Energy Program over the period of July 1, 2005 through June 30, 2006. Public Resources Code section 25748 requires the Energy Commission to report annually to the Legislature on the Renewable Energy Program and the report shall include the following:

- (1) A description of the allocation of funds among existing, new, and emerging technologies, the allocation of funds among programs, including consumer-side incentives, and the need for the reallocation of money among those technologies.
- (2) The status of account transfers and repayments.
- (3) A description of the cumulative commitment of claims by account, the relative demand for funds by account, and a forecast of future awards.
- (4) An itemized list, including project descriptions, award amounts, and outcomes for projects awarded funding in the prior year.

The *2006 Annual Report* must also address the allocation of interest earned on the funds deposited into the Renewable Resource Trust Fund (RRTF) and the voluntary contributions made by utility customers.

In addition, the *2006 Annual Report* must include a discussion of the progress being made toward achieving Renewables Portfolio Standard (RPS) targets identified in Public Resources Code section 25740 for each of the elements of the Renewable Energy Program. This PRC Section's referenced RPS target of 17 percent renewable energy generation by 2006 has since been replaced by a more comprehensive standard which requires retail sellers to procure at least 1 percent more renewable energy each year so that 20 percent of their total electric supply portfolio is made up of renewable energy generation by 2017. In 2003, the state's energy agencies accelerated this 20 percent goal to be met by 2010, and the Governor expanded the goal to 33 percent by 2020 for both investor-owned and municipal utilities. Integral to the RPS, production incentives referred to as supplemental energy payments (SEPs) will cover the appropriate above-market cost of renewable resources selected by retail sellers to fulfill their RPS obligations. Accordingly, the *2006 Annual Report* must also identify the biomass fuels used by facilities receiving SEPs and their impacts on improving air quality.

Following a background summary and legislative history of the Renewable Energy Program, this report is divided into six sections and an *Appendix* to address the requirements of section 25748:

<b>Section I</b>	<b>Allocation of Funds</b>
<b>Section II</b>	<b>Program Descriptions and Results</b>
<b>Section III</b>	<b>Reallocation of Funds</b>
<b>Section IV</b>	<b>Account Transfers and Repayments</b>
<b>Section V</b>	<b>Interest Expenditures</b>
<b>Section VI</b>	<b>Contributions to the Renewable Resources Trust Fund</b>
<b>Appendix</b>	<b><i>2006 Annual Report to the Legislature Appendix</i></b>

The *2006 Annual Report* discusses the mandated items for fiscal year 2005-2006, with reference to prior, present, and future fiscal years for context and comparison as appropriate.

## **Background**

In enacting the Renewable Energy Program's implementing legislation—Assembly Bill (AB) 1890 (Brulte), Chapter 854, Statutes of 1996, and Senate Bill (SB) 90 (Sher), Chapter 905, Statutes of 1997—the California Legislature directed that a portion of the funds collected from the ratepayers of the three major investor-owned utilities (IOUs) be used for statewide public benefit programs. As one of these important public purpose programs, the Renewable Energy Program began in 1998 by fostering the growth of the industry to increase renewable electricity production statewide. Under this legislation, the program continued through 2002 to provide financial incentives to support existing, new, and emerging renewable resources in a market environment.

With the passage of SB 1038 (Sher), Chapter 515, Statutes of 2002, the Renewable Energy Program was reauthorized through 2006; however its approach for supporting renewable energy development was impacted by the energy crisis of 2000 and 2001. California's move to a restructured electricity market and the resultant energy crisis prompted policy makers to pursue a new method to encourage the development of renewable power: the RPS. Under the RPS, the Renewable Energy Program's focus is twofold:

- To increase, in the near term, the quantity of California's electricity generated by renewable energy resources, while protecting system reliability, fostering resource diversity, and obtaining the greatest environmental benefits for California residents.
- To identify and support emerging renewable energy technologies with the greatest near-term commercial promise that merit targeted assistance.

The program continues to build a market for renewable energy by offering production incentives for new and existing utility-scale facilities powered by renewable energy; consumer rebates for on-site renewable energy systems; and consumer information on the purchase, installation, and available incentives for renewable energy. While the basic structure of the program has remained the same as described below, the state's

RPS sets the goals that help inform the policies of the other elements in the Renewable Energy Program:

- The New Renewable Facilities Program consists of two components. Under the first, production incentives provide support to prospective new renewable electricity generation projects. Once they come on-line, eligible projects receive payments for their first five years of generation. Secondly, under the RPS, the New Renewable Facilities Program will provide SEPs for up to 10 years to eligible projects for the above-market costs of meeting RPS requirements.
- The Emerging Renewables Program provides rebates and production incentives to end-use consumers who purchase and install renewable energy technologies, primarily solar photovoltaic and small wind systems, for on-site generation.
- The Existing Renewable Facilities Program provides production incentives to support existing renewable facilities with varying incentives based on the market competitiveness of California's existing renewable technologies.
- The Consumer Education Program awards grants and contracts to increase public awareness of renewable energy and its benefits, and helps develop a consumer market for renewable energy and small-scale emerging renewable energy technologies. Consumer Education Program funds are also used to develop an electronic accounting system to address long-term tracking needs of the RPS.
- The Customer Credit Program provided incentives to consumers who purchased renewable energy in the direct access market. This program allowed renewable energy providers to offer electricity products to their customers at prices competitive with conventional electricity products. The program was discontinued after payments made in December 2004 completed Customer Credit activities.

SB 1038 authorized the use of public goods charge funds collected from January 1, 2002 through December 31, 2006 to support the Renewable Energy Program. Future funding allocations for the Renewable Energy Program's activities were recommended by the Energy Commission in its *2006 Renewable Energy Investment Plan (2006 Investment Plan)*,<sup>1</sup> as required by AB 995 (Wright), Chapter 1051, Statutes of 2000 and SB 1194 (Sher), Chapter 1050, Statutes of 2000. The recent enactment of SB 1250 (Perata), Chapter 512, Statutes of 2006, provides new authority to use funds collected over the following five years to support the Renewable Energy Program.

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<sup>1</sup> California Energy Commission, February 2006, *2006 Renewable Energy Investment Plan*, CEC-300-2006-003-CMF, [energy.ca.gov/2006publications/CEC-300-2006-003/CEC-300-2006-003-CMF.PDF](http://energy.ca.gov/2006publications/CEC-300-2006-003/CEC-300-2006-003-CMF.PDF).

## ***Legislative History***

- AB 1890 required the state's three major IOUs—Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas and Electric Company (SDG&E)—to collect \$540 million from their ratepayers from 1998 through 2001 to support existing, new, and emerging renewable resources.
- SB 90 created the RRTF as a depository for funds collected under AB 1890 and authorized the Renewable Energy Program to distribute the funds consistent with the Energy Commission's 1997 renewable energy investment plan.<sup>2</sup> Subsequently, the Energy Commission adopted overall funding directives, eligibility requirements, yearly allocations, and specific guidelines to assist program participants in applying for funding.
- AB 995 and SB 1194 extended the collection of \$135 million per year, initiated under AB 1890, through 2011.
- SB 1038 authorized the Energy Commission to use funds collected pursuant to AB 995 and SB 1194 for the continued administration and support of the Renewable Energy Program from 2002 through 2006, and directed the distribution of these funds consistent with the Energy Commission's 2001 renewable energy investment plan.<sup>3</sup>
- SB 1078 (Sher), Chapter 516, Statutes of 2002, established the state's comprehensive RPS and requires retail sellers to increase their procurement of renewable energy to 20 percent by 2017. California's current energy policy accelerates the RPS target to 20 percent renewables by 2010 and the Governor expanded the goal to achieve 33 percent by 2020.
- SB 704 (Florez), Chapter 480, Statutes of 2003, required the Energy Commission to allocate \$6 million from the RRTF for incentives to electricity-generating facilities that increased their utilization of qualified agricultural biomass for the 2003-2004 fiscal year.
- SB 183 (Sher), Chapter 666, Statutes of 2003, amended and recast the provisions of Public Utilities Code sections 383.5 and 445 governing the Renewable Energy Program into Public Resources Code sections 25740 through 25751.
- SB 67 (Bowen), Chapter 731, Statutes of 2003, modified the eligibility requirements for renewable generators located out-of-state.

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<sup>2</sup> California Energy Commission, March 1997, *Policy Report on AB 1890 Renewables Funding*, P500-97-002, [www.energy.ca.gov/reports/1997-03-28\\_final\\_report.html](http://www.energy.ca.gov/reports/1997-03-28_final_report.html).

<sup>3</sup> California Energy Commission, June 2001, *Investing in Renewable Electricity Generation in California*, P500-00-022, [www.energy.ca.gov/reports/2001-06-21\\_500-00-022.PDF](http://www.energy.ca.gov/reports/2001-06-21_500-00-022.PDF).

- SB 168 (Bowen), Chapter 733, Statutes of 2003, made technical amendments to Public Utilities Code sections 383.5 and 445, which were chaptered out because SB 183 recast those provisions into the Public Resources Code.
- AB 135 (Reyes), Chapter 867, Statutes of 2004, authorized the use of an additional \$60 million of RRTF dollars for the Emerging Renewables Program element of the Renewable Energy Program. These funds may only be expended until December 31, 2008, and are subject to the repayment requirements of Public Resources Code section 25751, subdivision (f).
- AB 200 (Leslie), Chapter 50, Statutes of 2005, modified the eligibility requirements for renewable generators located out-of-state serving the load of utilities such as Sierra Pacific and PacifiCorp that have a limited number of customers in California and serve customers outside California.
- SB 1 (Murray), Chapter 132, Statutes of 2006, establishes in statute the California Solar Initiative, a \$3.35 billion rebate program for the installation of photovoltaic projects. The Emerging Renewables Program will be responsible for encouraging solar installations in the residential new construction market.
- SB 107 (Simitian), Chapter 464, Statutes of 2006, accelerates California's Renewables Portfolio Standard target by requiring retail sellers of electricity to increase renewable energy purchases by at least 1 percent per year with a target of 20 percent renewables by 2010.
- SB 1250, (Perata), Chapter 512, Statutes of 2006, authorizes the Energy Commission to use funds collected from January 1, 2007 through January 1, 2012 for the continued administration and support of the Renewable Energy Program.

The next section discusses Renewable Energy Program funding and expenditures from the RRTF for fiscal year 2005-2006 and summarizes cumulative funding to date.



## SECTION I. ALLOCATION OF FUNDS

Funding allocations for the Renewable Energy Program have supported renewable energy goals and policy priorities while responding to changing market conditions. Table 1 compares funding allocations under SB 90, SB 1038, and the subsequent reallocation of SB 1038 Customer Credit Program funds consistent with the Energy Commission's *Customer Credit Report*<sup>4</sup> recommendations.

**Table 1. Renewable Energy Program Funding Allocations  
1998 through 2006<sup>5</sup>**

Program	SB 90 1998-2001		SB 1038 2002-2006		SB 1038 2002-2006 (Reallocation of Customer Credit)	
	Percent of Total	\$Million	Percent of Total	\$Million	Percent of Total	\$Million
New Renewable Facilities	30%	\$162.0	51.5%	\$347.625	51.5%	\$347.625
Emerging Renewables	10%	\$54.0	17.5%	\$118.125	26.5%	\$178.875
Existing Renewables	45%	\$243.0	20%	\$135.000	20%	\$135.000
Consumer Education	1%	\$5.4	1%	\$6.750	2%	\$13.500
Customer Credit	14%	\$75.6	10%	\$67.500	0%	\$0.000
<b>TOTAL</b>	100%	\$540.0	100%	\$675.000	100%	\$675.000

Table 2 summarizes funding allocations for the next five years of the Renewable Energy Program.

**Table 2. Renewable Energy Program Funding Allocations  
January 1, 2007 through January 1, 2012**

Program	2007-2012 Allocations per SB 107 and SB 1250	
	Percent of Total	\$Million
New Renewable Facilities	51.5%	\$347.625
Emerging Renewables	37.5%	\$253.125
Existing Renewables	10%	\$67.500
Consumer Education	1%	\$6.750
<b>TOTAL</b>	100%	\$675.000

<sup>4</sup> California Energy Commission, April 2003, *Customer Credit Renewable Resources Account: Report to the Governor and the Legislature*, 500-03-008F, [www.energy.ca.gov/reports/2003-04-22\\_500-03-008F.PDF](http://www.energy.ca.gov/reports/2003-04-22_500-03-008F.PDF).

<sup>5</sup> The total amount collected each year is adjusted annually at a rate equal to the lesser of the annual growth in electric commodity sales or inflation, as defined by the gross domestic product deflator.

The Renewable Energy Program retains the authority to reallocate funds among its programs, as detailed in Section III of this report.

## Renewable Energy Program Disbursements

From the Renewable Energy Program's creation in 1998 through June 30, 2006, the Energy Commission has disbursed a cumulative total of \$655 million.<sup>6</sup> Over \$195 million<sup>7</sup> is encumbered for projects in progress, with more than \$177 million<sup>8</sup> in reserve to meet statutory requirements.<sup>9</sup> During the period of July 1, 2005 to June 30, 2006, approximately \$140.9 million was deposited into the RRTF and the Energy Commission disbursed over \$108 million<sup>10</sup> to program participants.

The following summarizes Renewable Energy Program cumulative funds disbursed and market support accomplishments through June 2006:

- Over \$62 million has been disbursed to 46 projects from the New Renewable Facilities Program, with approximately \$119 million encumbered for participating auction winners. Of the 68 active projects that won funding awards, 47 projects are online representing 488 megawatts (MW) of capacity (1 online project has not started collecting payments). When completed, winning projects from the New Renewable Facilities Program auctions will bring 1,237 MW of renewable energy capacity to California's electricity grid.
- Photovoltaic and wind energy systems installed on over 19,400 homes and businesses are providing 81 MW of distributed capacity, with over 23.6 MW in various stages of construction. The Emerging Renewables Program has provided rebates totaling over \$285 million<sup>11</sup> with an additional \$67.9 million<sup>12</sup> encumbered for 3,779 systems.

The Solar Schools Program, funded equally by the Emerging Renewables Program (\$2.25 million) and the California Attorney General's Alternative Energy Retrofit

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<sup>6</sup> Cumulative Renewable Energy Program RRTF disbursements of \$655 million do not include \$1,380,162 paid from the California Attorney General's Alternative Energy Retrofit Account (AGAERA). AGAERA provides match funds for the Emerging Renewables Program's Solar Schools Program that disburses rebates for the installation of solar photovoltaic systems for public and charter schools that meet certain eligibility requirements.

<sup>7</sup> Does not include \$507,395 AGAERA match funds encumbered for Solar Schools Program projects.

<sup>8</sup> Does not include \$362,444 AGAERA remaining dollars to fund Solar Schools Program projects.

<sup>9</sup> Reserved funds are committed to meet legislative mandates, but not yet formally assigned to specific projects. Legislative mandates are as follows: Supplemental energy payments under the RPS, a renewable energy certificate tracking and registry system, rebates for emerging renewable energy system installations, generation from existing renewable facilities, and consumer education activities.

<sup>10</sup> Does not include \$1,252,786 AGAERA match funds paid during FY 2005-2006 for Solar Schools Program projects.

<sup>11</sup> Does not include \$1,380,162 AGAERA match funds paid for Solar Schools Program projects.

<sup>12</sup> Does not include \$507,395 AGAERA match funds encumbered for Solar Schools Program projects.

Account (AGAERA, \$2.25 million), provides rebates for the installation of solar photovoltaic systems for public and charter schools that meet certain eligibility requirements. The Solar Schools Program has paid \$1,380,162 in Emerging Renewables Program RRTF dollars and match funds of \$1,380,162 AGAERA dollars for the installation of 21 photovoltaic systems for a total of about \$2.8 million. This represents a total of 441 kilowatts (kW).

- The Existing Renewable Facilities Program has helped 273 existing renewable facilities remain competitive or return to service with over \$230 million in funding, representing 4,400 MW of renewable energy capacity.

Existing Renewable Facilities Program dollars have also funded the Agriculture-to-Biomass Program. An additional \$6 million was paid to biomass facilities that increased their utilization of qualified agricultural biomass for the 2003-2004 fiscal year.

- Consumers statewide have received information about renewable energy and its benefits via public service announcements, events, radio and television, newspaper and magazine articles. Since 1999, the Consumer Education Program has expended, encumbered, or committed over \$14 million to support 3 public awareness campaigns funded through contracts; 21 grant projects awarded for renewable energy information and outreach activities, and the development of an electronic tracking system, called the Western Renewable Energy Generation Information System (WREGIS) to address long-term RPS tracking needs; and other Consumer Education activities promoting renewable energy.
- Among residential and small commercial customers who entered into direct access contracts with alternative providers, nearly 100 percent made renewable electricity purchases and were provided incentives through the Customer Credit Program. The discontinued program supported more than 200,000 customers purchasing renewable energy, with funds totaling over \$65 million.



## SECTION II. PROGRAM DESCRIPTIONS AND RESULTS

### Renewables Portfolio Standard

#### *Summary*

In September 2002, Governor Gray Davis signed SB 1078 creating California's RPS. SB 1078 requires retail sellers of electricity to increase their procurement of eligible renewable energy resources by at least one percent per year so that 20 percent of their retail sales are procured from eligible renewable energy resources by 2017.

In the *Energy Action Plan*<sup>13</sup> adopted in May 2003, the Energy Commission, the Consumer Power and Conservation Financing Authority, and the California Public Utilities Commission (CPUC) encouraged accelerating the RPS goal by attaining the target of 20 percent renewables by 2010. The Energy Commission adopted this goal in its 2003 *Integrated Energy Policy Report*,<sup>14</sup> which recommended that the state enact legislation to accelerate the RPS target to 20 percent by 2010, and the 2004 *Integrated Energy Policy Report Update*<sup>15</sup> endorsed goals beyond 2010.

As directed by SB 1078 and SB 1038, the New Renewable Facilities Program will provide SEPs to renewable electricity generators for the above-market costs of renewable energy procured to meet the RPS. However, the statutes allow that if the payments are insufficient to cover the above-market costs of eligible renewable energy resources, an investor-owned utility (IOU) could limit its annual procurement obligation to the quantity of eligible renewable energy that can be procured with available SEPs.

Additionally, the Energy Commission is charged with certifying facilities as eligible for the RPS or for the RPS and SEPs. The Energy Commission is also developing an electronic tracking system, the Western Renewable Energy Generation Information System (WREGIS), to track and verify renewable generation as required under SB 1078.

The next section of this report provides a discussion of the Energy Commission's and the CPUC's roles and activities in designing and implementing the RPS, and the IOUs' progress to date procuring renewables. The Energy Commission and the CPUC continue to work collaboratively to implement the program.

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<sup>13</sup> The *Energy Action Plan* is available on-line at [energy.ca.gov/energy\\_action\\_plan/2003-05-08\\_ACTION\\_PLAN.PDF](http://energy.ca.gov/energy_action_plan/2003-05-08_ACTION_PLAN.PDF).

<sup>14</sup> California Energy Commission, December 2003, *2003 Integrated Energy Policy Report*, 100-03-019, [www.energy.ca.gov/reports/100-03-019F.PDF](http://www.energy.ca.gov/reports/100-03-019F.PDF).

<sup>15</sup> California Energy Commission, November 2004, *Integrated Energy Policy Report 2004 Update*, 100-04-006CM, [www.energy.ca.gov/reports/CEC-100-2004-006/CEC-100-2004-006CMF.PDF](http://www.energy.ca.gov/reports/CEC-100-2004-006/CEC-100-2004-006CMF.PDF).

## ***Energy Commission's Renewables Portfolio Standard Roles***

The Energy Commission implements the RPS through guidelines that were originally adopted in spring 2004, with revisions adopted in August 2004, and again in April 2006. The three guidebooks are described as follows:

- The *Renewables Portfolio Standard Eligibility Guidebook*<sup>16</sup> describes the requirements and process for certifying eligible renewable energy resources for California's RPS and SEPs. The *Renewables Portfolio Standard Guidebook* also describes how the Energy Commission tracks and verifies compliance with the RPS using an interim generation tracking process.
- The *Overall Program Guidebook for the Renewable Energy Program*<sup>17</sup> describes how the Renewable Energy Program is administered and includes information on requirements that apply to all Renewable Energy Program elements, including the RPS. The *Overall Program Guidebook* provides general information on the process of creating, appealing, and implementing the RPS guidelines.
- The *New Renewable Facilities Program Guidebook*<sup>18</sup> describes the requirements applicants must satisfy to receive SEPs.

While the *Guidebooks* reflect current program requirements, the Energy Commission recognizes that it will need to periodically revise them to reflect market and regulatory developments and to incorporate the lessons learned from experience implementing the RPS.

On January 11, 2006, the Energy Commission made available a consultant report, *Building a "Margin of Safety" Into Renewable Energy Procurements: A Review of Experience with Contract Failure*.<sup>19</sup> The report summarizes experience with renewable energy contracts executed with IOUs, publicly-owned utilities, and as a result of government incentive auctions, focusing on the degree to which such contracts yield on-line and on-schedule renewable energy projects.

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<sup>16</sup> California Energy Commission, April 2006, *Renewables Portfolio Standard Eligibility Guidebook*, CEC-300-2006-007-F, [www.energy.ca.gov/2006publications/CEC-300-2006-007/CEC-300-2006-007-F.PDF](http://www.energy.ca.gov/2006publications/CEC-300-2006-007/CEC-300-2006-007-F.PDF).

<sup>17</sup> California Energy Commission, April 2006, *Overall Program Guidebook*, CEC-300-2006-008-F, [www.energy.ca.gov/2006publications/CEC-300-2006-008/CEC-300-2006-008-F.PDF](http://www.energy.ca.gov/2006publications/CEC-300-2006-008/CEC-300-2006-008-F.PDF).

<sup>18</sup> California Energy Commission, April 2006, *New Renewable Facilities Program Guidebook*, CEC-300-2006-006-F, [www.energy.ca.gov/2006publications/CEC-300-2006-006/CEC-300-2006-006-F.PDF](http://www.energy.ca.gov/2006publications/CEC-300-2006-006/CEC-300-2006-006-F.PDF).

<sup>19</sup> California Energy Commission, January 2006, *Building a "Margin of Safety" Into Renewable Energy Procurements: A Review of Experience with Contract Failure*, CEC-300-2006-004, [www.energy.ca.gov/2006publications/CEC-300-2006-004/CEC-300-2006-004.PDF](http://www.energy.ca.gov/2006publications/CEC-300-2006-004/CEC-300-2006-004.PDF).

At the February 1, 2006, Business Meeting, the Energy Commission adopted the *Renewables Portfolio Standard Procurement Verification Report (Verification Report)*,<sup>20</sup> relying on substantial public input. The report verifies RPS procurement for the 2004 calendar year and includes data from 2001 through 2004, when applicable. It provides data on the IOUs' progress toward the RPS procurement goals and is intended to assist the CPUC in its determination of the IOUs' compliance with the RPS. The Energy Commission intends to develop the *Verification Report* annually using data from its RPS accounting system (the Energy Commission is using an interim tracking system until WREGIS is operational).

As of June 30, 2006, the Energy Commission has certified 503 facilities as eligible to count towards the RPS, representing 8.17 gigawatts (GW). Of that generating capacity, 1,378 MW is proposed new capacity from planned facilities that have been conditionally pre-certified; however not all are yet under contract.

### ***California Public Utilities Commission's Renewables Portfolio Standard Implementation***

In July 2004, the CPUC adopted criteria for IOUs to select the least-cost, best-fit renewable resources from the IOUs' solicitations. Adoption of the rules for implementing SB 1078 opened the door for the IOUs to conduct their first formal RPS solicitation.<sup>21</sup> Previously, the utilities conducted solicitations to procure RPS-eligible energy under "interim" authority that the CPUC put in place while the RPS implementation rules were being developed.

The CPUC approved the utilities' RPS procurement plans and their 2004 Request for Offers, and directed SDG&E and PG&E to conduct the first formal RPS solicitations. The CPUC excused SCE from conducting a renewables solicitation in 2004 partly because of SCE's progress toward meeting the 20 percent renewable energy target.

In February 2005, the CPUC calculated the first market price referent which was used for PG&E's and SCE's 2004 solicitation. The market price referent represents the cost, over a 20-year period, to own and operate a new natural gas facility and earn a reasonable rate of return. Renewable contracts priced at or below the market price referent are considered *per se* reasonable; contracts above the market price referent may be eligible for the difference between the market price referent and the contract price, termed a supplemental energy payment.

In the spring of 2005, the IOUs submitted their draft RPS procurement plans and draft 2005 Request for Offers, which the CPUC approved in July 2005. The IOUs have since released their 2005 Request for Offers. The CPUC conditionally approved the IOUs'

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<sup>20</sup> California Energy Commission, February 2006, *Renewables Portfolio Standard Procurement Verification Report*, CEC-300-2006-002-CMF, [energy.ca.gov/2006publications/CEC-300-2006-002/CEC-300-2006-002-CMF.PDF](http://energy.ca.gov/2006publications/CEC-300-2006-002/CEC-300-2006-002-CMF.PDF).

<sup>21</sup> CPUC, D 04-07-029 in R.04-04-026, July 8, 2004.

2006 procurement plans on May 5, 2006.<sup>22</sup> After IOU compliance with the conditions, final plans were released.

During fiscal year 2005-2006, the CPUC continued its second phase of RPS implementation by addressing outstanding issues such as transmission planning for renewables, the development of implementation rules for electric service providers and community choice aggregators, and the refinement of RPS rules already in place. The CPUC is also investigating the participation of distributed generation in the RPS.

### ***Investor-Owned Utilities' Renewables Portfolio Standard Procurement***

In August 2003, SCE issued a solicitation for renewable energy under the interim procurement authority it was granted prior to the completion of RPS implementation rules. Although bids were due in September 2003, SCE's negotiations with short-listed bidders were not completed until March 2005. SCE submitted an advice letter to the CPUC requesting approval of six contracts totaling 142 MW of renewable energy capacity (643 gigawatt hours [GWh] annually), with potential to expand to 428 MW (2,127 GWh annually). The contracts were for energy from biomass, geothermal, and wind facilities.<sup>23</sup> The CPUC approved these 15- and 20-year contracts,<sup>24</sup> but deliveries will not begin in 2005 because project construction will not be completed until 2006-2008.<sup>25</sup> SCE also sought CPUC approval for four bilateral contracts executed with wind facilities that are being repowered and are anticipated to result in future deliveries of approximately 25 GWh annually.

SDG&E and PG&E completed their first RPS solicitations in August 2004. PG&E and SDG&E evaluated the bids using the least-cost, best-fit process to select their initial "short list" of preferred bidders. When the utilities notified the CPUC that they had selected their short lists (in September 2004 and December 2004 for PG&E and SDG&E, respectively), it triggered the CPUC to release the market price referent.

The CPUC has approved SCE Power Purchase Agreements for 25 MW of incremental wind generation from existing wind facilities, 22–75 MW from a new wind facility, and 500 MW of solar thermal generation. The solar thermal project will be the largest solar project in the world; to be successful, the vendor must build a mass production plant and bring costs below current levels.

SDG&E has executed a CPUC approved contract for a similar solar thermal project with 300 MW of capacity. SDG&E has also executed contracts for two landfill gas projects

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<sup>22</sup> CPUC, D.06-05-39 Approving RPS Procurement Plans and Closing R.04-04-026, May 5, 2006.

<sup>23</sup> Southern California Edison, March 25, 2005, "Advice 1876-E-A to Public Utilities Commission of the State of California Energy Division, Supplement to Submission of Contracts for Procurement from Renewable Resources Pursuant to California Renewables Portfolio Standard Program."

<sup>24</sup> CPUC, Energy Division, Resolution E-3934, June 30, 2005.

<sup>25</sup> Actual on-line dates range from Dec 31, 2006 to March 31, 2008. SCE, March 8, 2005, Advice Letter 1876-E to the Public Utilities Commission of the State of California, Energy Division.

totaling 19 MW, and has filed an advice letter with the CPUC seeking approval of a 205.5 MW wind project in Tehachapi. In May 2006, SDG&E requested CPUC approval of a 20 MW geothermal project which resulted in July and August 2006 SEP applications filed by SDG&E and the developer.

In April 2005, the CPUC approved three PG&E wind contracts totaling 142–158 MW from PG&E’s 2004 solicitation.<sup>26</sup> The CPUC approved additional PG&E wind contracts in July and August 2005, totaling 195–233 MW. All of these wind contracts were priced below the market price referent. In May 2006, PG&E requested CPUC approval of a new 120 MW geothermal contract. Because the Power Purchase Agreement was priced above the 2004 market price referent, the PG&E developer has begun the application process for SEPs.

SDG&E, SCE and PG&E have closed their 2005 RPS solicitations to new bids. PG&E’s 2005 solicitation has, to date, resulted in applications to the CPUC for approval of five contracts (three geothermal, one biogas, and one biomass) that will total 151–274 MW. Although SCE has not yet filed for CPUC approval of contracts resulting from the 2005 solicitation, the utility recently sought CPUC approval for four RPS-eligible bilateral contracts for wind, totaling 37 MW.

Table 3 lists the RPS contracts for new, re-powered, or re-started renewable energy that have been approved by, or submitted to, the CPUC as of October 3, 2006. The table includes both contracts resulting from competitive solicitations, and bilateral contracts negotiated between the utility and the developer. All but two contracts are priced below the market price referent.

**Table 3. IOU RPS Contracts for New, Re-powered, or Re-started Renewables by Technology (MW)**

	<b>PG&amp;E</b>	<b>SCE</b>	<b>SDG&amp;E</b>	<b>Total</b>
<b>Wind</b>	251	181 - 352	357	789 - 960
<b>Biogas</b>	5 - 10	6	38	49 - 54
<b>Geothermal</b>	356 - 454	230 - 320	20	606 - 794
<b>Biomass</b>	91 - 111	58 - 138	49	198 - 298
<b>Solar Thermal Electric</b>	0	500 - 850	300 - 900	800 - 1,750
<b>Small Hydropower</b>	30	47	5	82
<b>Total</b>	<b>733 - 856</b>	<b>1,022 - 1,713</b>	<b>769 - 1,369</b>	<b>2,524 - 3,938</b>

Capacity does not include contracts that have been cancelled or expired.

Source: California Energy Commission, Database of IOU Contracts for Renewable Generation, October 3, 2006 update, [www.energy.ca.gov/portfolio/IOU\\_CONTRACT\\_DATABASE.XLS](http://www.energy.ca.gov/portfolio/IOU_CONTRACT_DATABASE.XLS).

<sup>26</sup> CPUC, Energy Division, Resolution E-3994, July 21, 2005.

Contract negotiations have taken longer than the utilities anticipated. In their requests for offers, the utilities estimated the amount of time needed between the release of their solicitations and the filing of their contract advice letters with the CPUC as follows: four months for SCE, five months for PG&E, and nine months for SDG&E. In practice, however, it took SCE 20 months and PG&E nine months to file their advice letters, and SDG&E is currently three months behind schedule.

The delays are largely related to negotiations over contract terms and conditions. Other sources of delay include the selection process for the short list of least-cost, best-fit bidders, especially in relation to estimating transmission costs and uncertainty regarding potential federal or state regulatory changes. In addition, some contracts depend on timely development of transmission facilities. Details of RPS contracts executed in fiscal year 2005-2006 are included in the *2006 Annual Report Appendix, Appendix A*, located on the Energy Commission’s website at [www.energy.ca.gov/renewables/documents/index.html](http://www.energy.ca.gov/renewables/documents/index.html).

Table 4 shows the percentage of retail sales served by RPS-eligible resources for each IOU for 2001, 2004, and 2005. Although the data is informative about the IOUs’ progress towards meeting the RPS, actual compliance is determined by the CPUC and includes consideration of its rules for flexible compliance.

**Table 4. California Investor-Owned Utilities Progress Toward 20 Percent Renewables by 2010 (Percent Renewables)**

IOU	2001 <sup>1</sup>	2004 <sup>1</sup>	2005 <sup>2</sup>
PG&E	8.9%	11.7%	11.9%
SCE	14.8%	18.2%	17.2%
SDG&E	1.0%	4.3%	5.2%
<b>Total</b>	<b>10.5%</b>	<b>10.2%</b>	<b>13.7%</b>

<sup>1</sup> Sources for 2001 and 2004 data: California Energy Commission, February 2006, *Renewables Portfolio Standard Procurement Verification Report (Tables 9, 12, 15)*, CEC-300-2006-002-CMF, located at [energy.ca.gov/2006publications/CEC-300-2006-002/CEC-300-2006-002-CMF.PDF](http://energy.ca.gov/2006publications/CEC-300-2006-002/CEC-300-2006-002-CMF.PDF) and California Electrical Energy Generation, 1983 to 2004, Total Production by Resource Type, located at [www.energy.ca.gov/electricity/ELECTRICITY\\_GEN\\_1983-2004.XLS](http://www.energy.ca.gov/electricity/ELECTRICITY_GEN_1983-2004.XLS).

Note: Small hydroelectric estimated to be 13% of total hydroelectric generation; percentages based on utilities’ retail sales.

<sup>2</sup> Source for 2005 data: CPUC Docket for R.06-05-027, August 1, 2006 Renewables Portfolio Standard Compliance Filings of SCE, SDG&E and PG&E.

## New Renewable Facilities Program

The New Renewable Facilities Program presently consists of two components. The original program provides production incentives to new renewable generating facilities in accordance with the guidelines from the initial program under SB 90. These incentives

are paid in addition to what the facility is paid for its electricity. The program evolved under SB 1038 and SB 1078 to offer production incentives to cover above-market costs of meeting the RPS, subject to certain cost constraints. If an eligible facility secures a power purchase agreement with a retail seller through a competitive solicitation, it may apply for SEPs.

## ***New Renewable Facilities Program under SB 90***

### **Summary**

The New Renewable Facilities Program originally awarded funding through competitive auctions in which facilities bid for the amount of incentive they wished to receive, up to a maximum of 1.5 cents per kilowatt-hour (cents/kWh). The Energy Commission held three such auctions between March 1998 and June 2001, awarding approximately \$242 million to 81 facilities that represented about 1,300 MW of capacity.

To receive funding from the Energy Commission, facilities must meet a series of milestones and begin commercial operation. Once on-line, the facilities receive incentive payments for a maximum of five years. Thirteen of the 81 facilities were unable to meet their milestones, subsequently canceling their funding awards for a variety of reasons that included public opposition or inability to secure a fuel supply or power purchase contract.

Table 5 summarizes the remaining 68 participating facilities by technology.

**Table 5. New Renewable Facilities Program  
Summary of Auction Winning Facilities**

<b>Technology</b>	<b># of Projects</b>	<b>Capacity (MW)</b>	<b>Average Incentive (¢/kWh)</b>	<b>Total Funds Committed<sup>1</sup></b>
Biomass	2	11.30	1.35	\$3,787,902.00
Digester Gas	1	2.05	1.39	\$1,148,209.50
Geothermal	4	156.90	1.28	\$75,563,854.80
Landfill Gas	17	50.57	1.11	\$18,042,206.52
Small Hydro	5	33.24	1.19	\$4,208,466.82
Wind	39	982.67	0.74	\$79,098,474.83
<b>Total</b>	<b>68</b>	<b>1,236.73</b>	<b>0.86</b>	<b>\$181,849,114.46</b>

<sup>1</sup> The total funds committed for winning bidders in the second and third auctions reflect both the loss of potential bonuses for early on-line dates and 50% penalties for later on-line dates for those projects not yet on-line. The original conditional funding awards for winning bidders in the second and third auctions included potential bonuses for early on-line dates and did not reflect potential penalties for later on-line dates.

## Activities and Status of Projects

Of the 68 active facilities shown in Table 6, 47 are on-line and producing electricity. Table 6 shows these 47 facilities by technology.

**Table 6. Summary of On-Line Projects  
June 1999 to June 30, 2006**

<b>Technology</b>	<b>MW On-Line</b>	<b># of Projects</b>
Biomass	11.30	2
Digester Gas	2.05	1
Geothermal	59.00	2
Landfill Gas	36.37	14
Small Hydro	31.25	3
Waste Tire	0	0
Wind	348.12	25
<b>Total</b>	<b>488.09</b>	<b>47<sup>1</sup></b>

<sup>1</sup> The Wintec #2 wind project was split into two projects during fiscal year 2005-2006 as described below, but in order to maintain consistency with previous years, it will continue to be treated as one project for purposes of this section.

A summary of payments made by technology, through June 30, 2006, is shown in Table 7.

**Table 7. Summary of Payments through June 30, 2006**

<b>Technology</b>	<b>MW</b>	<b>MW On-line</b>	<b>Total Payments</b>	<b>Total Funds Committed and Paid</b>	<b>Percent of Committed Funds Paid</b>
Biomass	11	11	\$2,155,093	\$3,787,902.00	57%
Digester Gas	2	2	0	\$1,148,209.50	0%
Geothermal	157	59	\$25,252,142	\$75,563,854.80	33%
Landfill Gas	51	36	\$11,213,489	\$18,042,206.52	62%
Small Hydro	33	31	\$2,239,270	\$4,208,466.82	53%
Wind	983	348	\$21,793,092	\$79,098,474.83	28%
<b>Total</b>	<b>1,237</b>	<b>488</b>	<b>\$62,653,086.44</b>	<b>\$181,849,114.46</b>	<b>34%</b>

As of June 30, 2006, 46 facilities had received incentive payments totaling \$62.7 million for 6,561 GWh of generation. During the 2005-2006 fiscal year, a total of \$12.7 million was disbursed for 1,659 GWh of generation. A detailed list of payments and generation for all projects receiving funding during fiscal year 2005-2006 is referenced in the *2006 Annual Report Appendix, Appendix B*, on the Energy Commission's website at [www.energy.ca.gov/renewables/documents/index.html](http://www.energy.ca.gov/renewables/documents/index.html).

Decisions occurring in fiscal year 2005-2006 affecting projects participating in the program include the following:

- Funding Award Agreement REN-98-006 (50004), Amendment 1, was approved to assign funding for the Buena Vista Landfill Gas Power Project from the County of Santa Cruz to Ameresco Santa Cruz Energy LLC and increase project capacity from 1.97 MW to 3.2 MW.
- Funding Award Agreement REN-98-049 (50005), Amendment 1, was approved to reduce the award to the City of Sunnyvale (at its request) from \$210,448 (18,709,000 kWh) to \$103,968 (9,193,626 kWh).
- Funding Award Agreement REN-01-077 (50077), for the Mesquite Lake Resource Recovery Facility was cancelled at the request of the company, Chateau Energy, which was unable to locate a viable tire-gasification process.
- The Energy Commission approved an amendment to Funding Award Agreement REN-98-033 (50044) to change the awardee's name from MM Woodville Energy, LLC to Cambrian Energy Woodville, LLC.
- The Energy Commission approved an amendment to Funding Award Agreement REN-01-065 (50065) for the Wintec Energy #2 project, to split the award and assign a portion of the funding award to Mountain View Power Partners III, LLC. Wintec Energy Ltd. retained two-sevenths of the original project under Funding Award Agreement REN-01-065 with a new project name of Wintec Energy #2-A. The remainder of the funding award was assigned to Mountain View Power Partners III, LLC under Funding Award Agreement REN-05-001 (50084), with a project name of Wintec Energy #2-B.

The SB 90 New Renewable Facilities Program guidelines have also incorporated the following decisions:

- The law originally required winning facilities to be on-line by January 1, 2002, to be able to receive five full years of incentive payments. However, the law was changed in September 2000 to allow facilities to come on-line as late as January 1, 2007, and still receive five years of incentive payments. This allowance is contingent on the Energy Commission making a formal finding that the delayed on-line date resulted from "circumstances beyond the developer's control."

- For winners in the June 2001 auction, the Energy Commission determined that the timing of the auction in itself constituted “circumstances beyond the project developer’s control” for purposes of extending the funding awards. The awards of those facilities were therefore automatically extended to July 1, 2003, but are still subject to the penalties already imposed as a condition of that auction.
- Facilities from the June 2001 auction that were not online by July 1, 2003 can only receive a maximum of 50 percent of their original awards, and also face further award reductions or termination.

## ***New Renewable Facilities Program under SB 1038 and SB 1078***

### **Supplemental Energy Payments**

With the passage of SB 1038 and SB 1078, the Energy Commission will award production incentives from the New Renewable Facilities Program through competitive RPS solicitations run by IOUs, rather than through auctions. New renewable facilities that meet specific eligibility requirements may receive SEPs that will be paid for each kilowatt-hour of eligible electricity they generate. The New Renewable Facilities Program was allocated 51.5 percent of the Renewable Energy Program funds, about \$69.5 million per year, for SEP funds.

When the Renewable Energy Program was established in 1998, a “new” facility was defined as beginning operation after September 26, 1996. Under the California RPS program, “new” is now defined as beginning operation on or after January 1, 2002. To be eligible for SEPs, a facility must begin commercial operations or be repowered on or after January 1, 2002, or such later date as determined by the Energy Commission. Also a facility must not be owned by an IOU or a local publicly-owned electric utility, and the electricity it generates must not be sold under certain long-term contracts with an in-state IOU, used on-site, or sold in a manner that avoids competitive transition charge payments. The facility must meet fuel and technology-specific criteria and agree to participate in the Energy Commission’s tracking system in order to become certified with the Energy Commission as eligible for the RPS and SEPs.

In April 2006, the Energy Commission adopted a revised *New Renewable Facilities Program Guidebook* that made changes in the SEP application process and data requirements. In order to make efficient use of public funds for SEPs, the Energy Commission now requires the IOUs to provide specific data about below- and above-market bids received in response to RPS solicitations. The revised *Guidebook* also added a new section regarding prevailing wage requirements.

As of June 30, 2006, the Energy Commission had not received any complete applications for SEPs. However, staff expects to receive at least two applications in the near future, and the probability of numerous additional applications resulting from the 2005 and 2006 IOU RPS solicitations remains high.

## ***New Renewable Facilities Program Funding Status***

Table 8 summarizes fiscal transactions for the New Renewable Facilities Program through June 30, 2006.

**Table 8. New Renewable Facilities Program  
Cumulative Funding and Expenditures as of June 30, 2006**

<b>New Renewable Facilities Program (\$ Millions)</b>	
<b>Collected Funds</b>	
SB 90	162.000
SB 1038	319.115
Bear Valley Electric	0.159
<b>Intrafund Reallocations</b>	
Existing Renewable Facilities to New Renewable Facilities for 2nd auction	40.000
\$40M for 2nd auction reduced to \$33.8M; \$6.2M difference to Emerging	-6.200
<b>Total Collected and Reallocated</b>	<b>515.074</b>
<b>Disbursements</b>	-62.653
<b>Encumbrances</b>	-119.304
<b>Intrafund Transfer<sup>1</sup></b>	
Temporary transfer to Emerging Renewables to supplement funds for rebates (AB 135) <sup>2</sup>	-60.000
<b>BALANCE</b>	<b>273.117</b>

<sup>1</sup> Public Resources Code section 25751(f) authorizes the Energy Commission to transfer funds among program accounts in the RRTF for cash flow purposes, provided that the balance due each program account is restored and the transfers do not adversely affect any of the programs.

<sup>2</sup> Beginning in January 2005, AB 135 authorizes the use of an additional \$60 million of RRTF funds to be collected from 2007 through 2011, and subject to the repayment requirements of Public Resources Code section 25751(f).

# Emerging Renewables Program

## *Summary*

The Emerging Renewables Program provides incentives in the form of rebates to customers who install eligible renewable energy systems to offset part or all of their electricity needs at their homes or businesses. The program was initially allocated \$54 million for incentive payments from 1998 through 2001. In 2002, under SB 1038, over \$118 million was allocated for rebates from 2002 through 2006. Beginning in January 2005, AB 135<sup>27</sup> authorized the use of an additional \$60 million of RRTF dollars to be collected from 2007 through 2011, and subject to the repayment requirements of Public Resources Code section 25751(f). Several past RRTF reallocations (see Table 9) have served to supplement Emerging Renewables Program rebate dollars, including the Energy Commission's reallocation of \$10 million in RRTF earned interest and 90 percent of the SB 1038 funds collected for the discontinued Customer Credit Program (totaling over \$60 million collected over five years).

The goal of the Emerging Renewables Program is to stimulate the market for distributed renewable energy until incentives are no longer needed to sustain the market for these technologies. A major barrier to consumer adoption is price, although rebates reduce the initial net purchase cost of the systems, thereby stimulating sales. The dramatic growth in demand in recent years has encouraged manufacturers to expand their production volume, which in turn improved the distribution network and increased the number of qualified installers. Because the market's expansion improves economies of scale, the Energy Commission anticipates lower system costs over the long term, particularly as technology advances.

Monies are transmitted to the Energy Commission's RRTF on a quarterly basis, yet the demand for rebates can outpace the collection of funds. To respond to rebate requests and maintain momentum in the Emerging Renewables Program, funds may be borrowed from future quarters as needed, provided the total program allocation is not exceeded. Rebate funds are available on a first-come, first-served basis until the total funding is exhausted. Any funds from cancelled or expired rebate reservations are made available to new participants. The rebate incentive levels, based on a system's generating capacity and measured in watts (AC), have varied over the duration of the program. They have traditionally declined by 20 cents per watt (cents/watt) on July 1 and January 1 of each year, however the Energy Commission may decide to change the rebate amounts or schedule. In January 2006, the Energy Commission decided not to reduce the rebate level for each eligible technology, and increased the rebate level for wind. In June 2006, the Energy Commission decided to drop the rebate level by 20 cents for all technologies except wind (the rebate level was maintained at the January 2006 level).

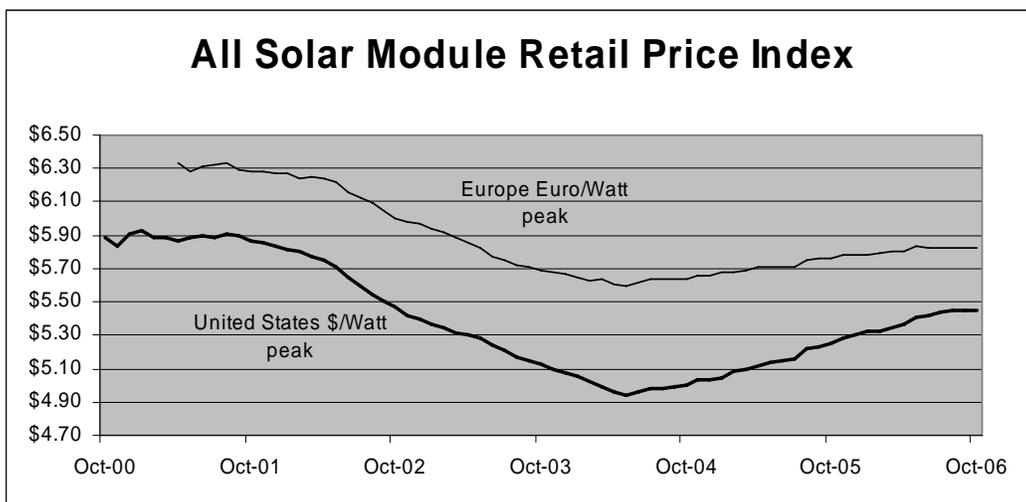
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<sup>27</sup> As codified in Public Resources Code section 25744, subdivision (c).

To be eligible to receive rebates from the Emerging Renewables Program, a number of basic criteria must be met. The generating system must be new, utilize an eligible technology type and major system components (e.g., photovoltaic modules, inverters, wind turbines, etc.) approved by the Energy Commission, and be installed with a five-year warranty. In addition, the generating system must be installed on a site that is served by an eligible electric utility, and must primarily offset the electricity demands of its installation site. The eligible technology types are currently limited to solar photovoltaic systems, solar thermal electric systems, fuel cell technologies that utilize renewable fuels, and small wind turbines under 30 kilowatts in size.

It is important to note that photovoltaic module prices have increased through much of 2005-2006, as shown in Figure 1, due to a number of market conditions. In particular, the heavy demand from Europe (especially Germany) and Japan has resulted in product shortages and higher prices.

**Figure 1. Solar Module Retail Prices<sup>28</sup>**  
(Survey Retail Prices Exclude Sales Taxes)



### ***Program Activities and Status***

In 2002, SB 1038 provided a new funding allocation to the Emerging Renewables Program of 17.5 percent of the program funds, while AB 58 (Keeley), Chapter 836, Statutes of 2002, section 1 as codified in Public Resources Code section 25401.6, authorized the Energy Commission to establish rebates of up to 75 percent of total installed costs for systems installed on affordable housing projects.

In July 2005, the *Emerging Renewables Program Guidebook (Guidebook, Fifth Edition)*<sup>29</sup> included the following significant program changes:

<sup>28</sup> Source: Solarbuzz Inc., [www.solarbuzz.com](http://www.solarbuzz.com), August 28, 2006.

- Maintain the current rebate levels for eligible renewable energy technologies.
- Raise the potential capacity factor of systems from 25 percent to 30 percent for purposes of determining the amount of funds reserved under the Pilot Performance-Based Incentive program.
- Remove the requirement that program participants must provide a utility letter of authorization in order to verify a system's approved interconnection to the utility distribution grid.
- Suspend the Solar School Program element until further notice.
- Clarify requirements for affordable housing projects.
- Clarify requirements for new construction development projects.

In January 2006, the Energy Commission revised and adopted the *Guidebook (Sixth Edition)*<sup>30</sup> incorporating the following noteworthy program changes:

- Effective January 1, 2006, maintain the rebate for photovoltaics at \$2.80/watt; maintain the rebate for fuel cells and solar thermal electric at \$3.20/watt; increase the rebate for wind systems to \$2.50/watt for the first 7.5 kW and \$1.50/watt for increments above 7.5 kW and less than 30 kW.
- Extend the reservation period from six months to nine months for standard applications. Current six-month reservation holders will receive an automatic three-month extension.
- Clarify that 18-month reservations for public and charter schools and new construction may qualify for time extensions of up to six months under the conditions specified in the version of the *Guidebook* in place at the time the complete reservation application was submitted.
- Require that affordable housing project applicants use an energy consultant certified by the California Association of Building Energy Consultants when verifying compliance with energy efficiency requirements.
- Lower the capacity factor of systems from 30 percent to 20 percent (except for projects that use tracking systems) for purposes of determining the amount of funds reserved under the Pilot Performance-Based Incentive program.
- Simplify the rebate calculation for system modifications and additions.

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<sup>29</sup> California Energy Commission, July 2005, *Emerging Renewables Program Guidebook, Fifth Edition*, 300-2005-001-ED5F, [www.energy.ca.gov/2005publications/CEC-300-2005-001/CEC-300-2005-001-ED5F.PDF](http://www.energy.ca.gov/2005publications/CEC-300-2005-001/CEC-300-2005-001-ED5F.PDF).

<sup>30</sup> California Energy Commission, January 2006, *Emerging Renewables Guidebook, Sixth Edition*, 300-2006-001-ED6F, [www.energy.ca.gov/2006publications/CEC-300-2006-001/CEC-300-2006-001-ED6F.PDF](http://www.energy.ca.gov/2006publications/CEC-300-2006-001/CEC-300-2006-001-ED6F.PDF).

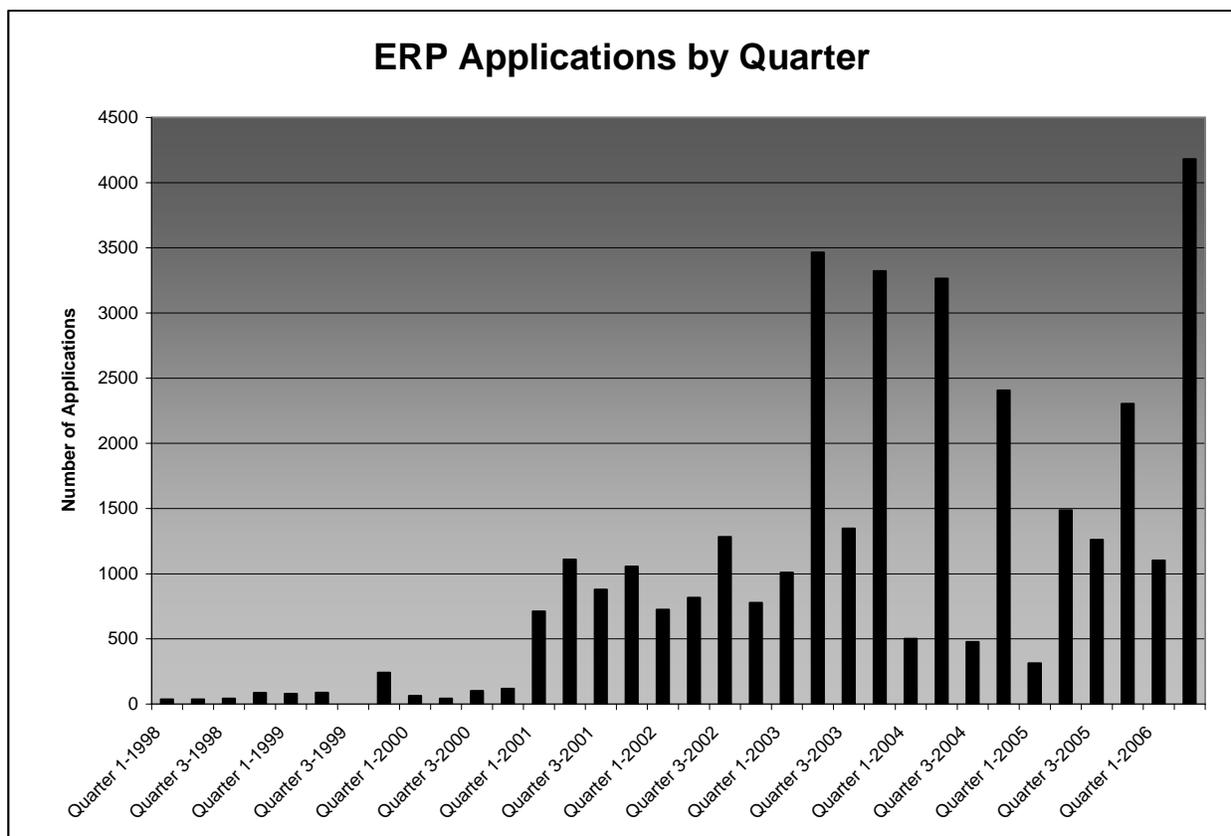
During June 2006, the Energy Commission further revised and adopted the *Guidebook (Seventh Edition)*<sup>31</sup> incorporating the following important program change:

- Effective July 1, 2006, maintain the current rebate level for wind systems to \$2.50/watt for the first 7.5 kW of capacity and \$1.50/watt for incremental capacity above 7.5 kW and less than 30 kW.

However, as mentioned above, the rebate for other technologies, including photovoltaics, fell by 20 cents/watt. Both the number of applications and requested generating capacity increased by 200 percent during the 2005-2006 fiscal year compared to the previous 2004-2005 fiscal year. For the period of July 2005 to June 2006, a total of 8,849 applications were received (53 MW of generating capacity) compared to 4,818 (26 MW of generating capacity) for the previous fiscal year.

Reservation activity since the beginning of the Emerging Renewables Program through June 2006 is noted in Figure 2.

**Figure 2. Reservation Activity by Quarter  
January 1998 through June 2006**



<sup>31</sup> California Energy Commission, June 2006, Emerging Renewables Guidebook, Seventh Edition, 300-2006-001-ED7F, [www.energy.ca.gov/2006publications/CEC-300-2006-001/CEC-300-2006-001-ED7F.PDF](http://www.energy.ca.gov/2006publications/CEC-300-2006-001/CEC-300-2006-001-ED7F.PDF).

During fiscal year 2005-2006, the Energy Commission paid about \$74.6 million<sup>32</sup> to rebate applicants for 5,616 completed projects located in IOU service areas. These projects represent 25.8 MW of generating capacity from photovoltaic and wind systems. Since the Emerging Renewables Program's beginning in 1998 through June 2006, over 19,400 emerging renewable systems have been installed with support from the program, representing 81 MW of distributed renewable electricity capacity, bringing total disbursements to about \$285 million.<sup>33</sup>

As of June 30, 2006, customers planning to install 3,779 additional systems held rebate reservations totaling over 23.6 MW of solar and wind capacity in various stages of completion, encumbering about \$67.9<sup>34</sup> million. Over \$11.9 million<sup>35</sup> remains available for rebates in the main Emerging Renewables Program, with an additional estimated \$1.9 million remaining in the Pilot Performance-Based Incentive Program. Figure 3 shows payment activity since the program's inception through June 2006.

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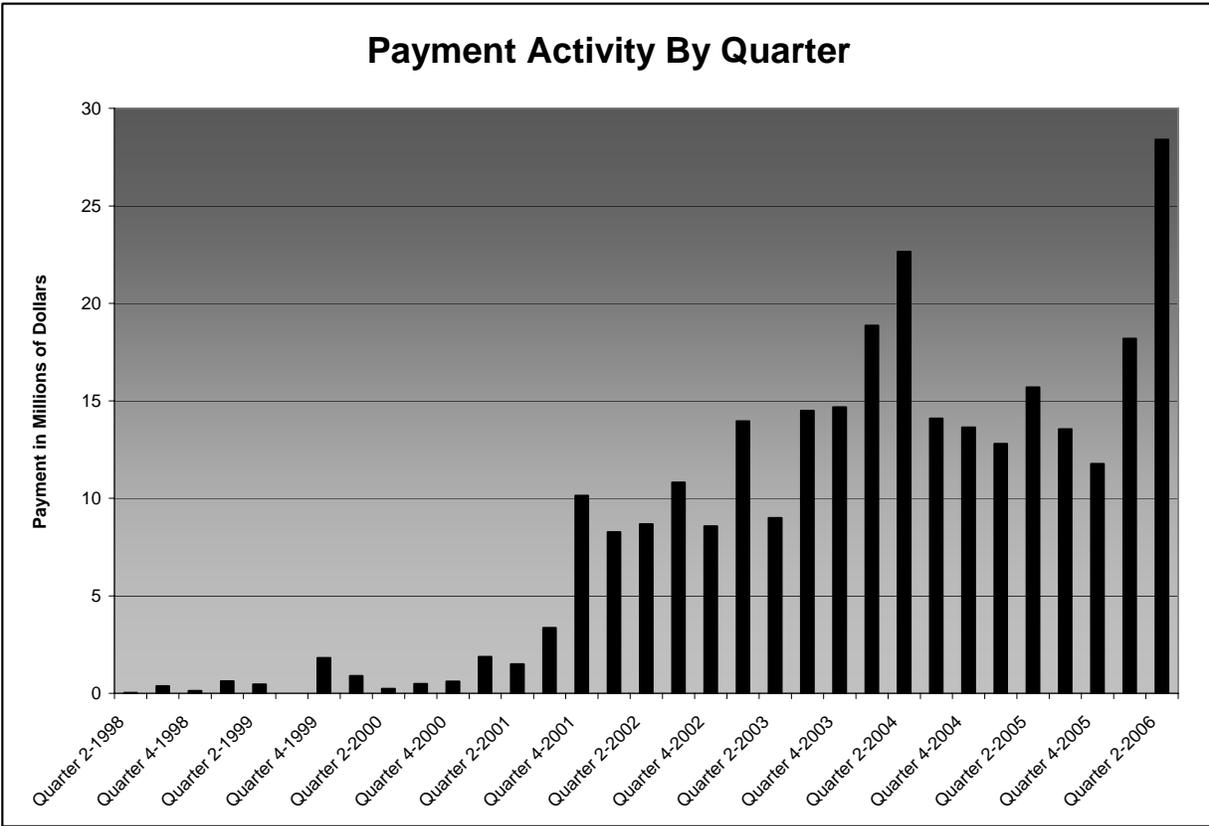
<sup>32</sup> Does not include \$1,252,786 AGAERA funds paid during FY 2005-2006 for Solar Schools Program projects. FY 2005-2006 Emerging Renewables Program and AGAERA payments total \$75.9 million.

<sup>33</sup> Does not include \$1,380,162 AGAERA funds paid for Solar Schools Program projects. Cumulative Emerging Renewables Program and AGAERA payments total \$286.8 million.

<sup>34</sup> Does not include \$507,395 AGAERA funds encumbered for Solar Schools Program projects. Cumulative Emerging Renewables Program and AGAERA encumbrances total \$68.4 million.

<sup>35</sup> Does not include \$362,444 AGAERA balance to fund Solar Schools Program projects. Cumulative Emerging Renewables Program and AGAERA remaining dollars total \$12.3 million.

**Figure 3. Payment Activity by Quarter  
February 1998 through June 2006  
(\$ Millions)**



Staff continues to update the list of approved major system components and make it available to consumers online and via regular mail with assistance from the Renewable Energy Program's technical support contractor, KEMA, Inc. The KEMA team also has conducted site visits to verify that systems installed using rebate funds comply with the program's requirements. KEMA's verification report<sup>36</sup> was posted on the Energy Commission website in February 2006 and includes sections on:

- Investigating that the correct rebate amount was paid.
- Verifying system operation and performance.
- Surveying customers' installation experience and satisfaction.

<sup>36</sup> KEMA, Inc., December 2005, *Emerging Renewables Program Systems Verification Report 2004-2005, Consultant Report*, CEC-300-2005-019, [www.energy.ca.gov/2005publications/CEC-300-2005-019/CEC-300-2005-019.PDF](http://www.energy.ca.gov/2005publications/CEC-300-2005-019/CEC-300-2005-019.PDF).

## **Pilot Performance Based Incentive (PBI)**

This pilot program began in January 2005 as a possible long-term option for building the PV market in California. With a budget of \$10 million, the program offers a rebate level of 50 cents/kWh paid quarterly over three years for electricity generated by an eligible PV system. The reservation period under the Pilot PBI Program consists of two parts: (1) a preliminary reservation during which the applicant must purchase and install the proposed system, and (2) a final reservation during which the applicant may submit quarterly invoices to claim incentive payments for the system's generation. The amount of funding available for any system or group of systems at one site is capped at \$400,000. In addition, the maximum level of funding available for all systems installed by any corporate or government parent is capped at \$1,000,000.

As of June 30, 2006, funds encumbered for 31 applications represented \$6.7 million and 2 MW of capacity. Nine applications remain under review representing potentially \$2.9 million in reserved funds and approximately 1.1 MW of capacity.

## **Affordable Housing Program**

Pursuant to AB 58, the Energy Commission has established a higher rebate level for qualifying systems installed on affordable housing projects. Qualifying systems include systems connected to and serving the energy needs of: 1) residential units subject to affordability requirements, 2) the office and residential unit of the project manager, provided all other residential units in the project are subject to affordability requirements, and 3) the common areas of the project, such as laundry rooms and parking structures, provided all residential units in the project (except the manager's unit) are subject to affordability requirements. Qualifying systems installed on affordable housing projects will receive a rebate 25 percent higher than the standard rebate level, not to exceed 75 percent of the system cost.

For the period of July 1, 2005 to June 30, 2006, the program paid \$1.09 million to 109 affordable housing projects; \$1.54 million in incentives remain reserved for 34 affordable housing reservations to install photovoltaic systems. The Affordable Housing Program represents 249 kW of installed renewable electricity capacity.

## **Solar Schools Program**

In May 2004, the Energy Commission adopted specific funding and eligibility requirements for the Solar Schools element of the Emerging Renewables Program. The \$4.5 million in incentives for the program, funded equally by the Energy Commission's Emerging Renewables Program (\$2.25 million) and the AGAERA (\$2.25 million), provides rebates for the installation of solar photovoltaic systems for public and charter schools that meet certain eligibility requirements. In June 2006, the Energy Commission approved an eighteen month, no-cost time extension to the Solar Schools Program agreement. The special funding for the Solar Schools Program is now set to expire on June 30, 2008.

For fiscal year 2005-2006, the program paid \$1,252,786 in Emerging Renewable Program RRTF dollars and match funds of \$1,252,786 AGAERA dollars for a total of \$2.5 million. These support dollars funded 19 photovoltaic system installations representing 392 kW of renewable electricity capacity. Incentives of \$1.01 million (\$507,395 RRTF, \$507,395 AGAERA) remain reserved for 8 schools.

As of June 30, 2006, cumulative Solar Schools Program payments of \$1,380,162 Emerging Renewables Program RRTF dollars and \$1,380,162 AGAERA match funds represent a total of 21 installed photovoltaic systems for 441 kW of renewable electricity capacity.

## **California Solar Initiative / New Solar Homes Partnership (NSHP)**

Long a leader in environmentally-sound approaches to energy use and conservation, California continues that tradition with an aggressive new program to promote solar development. At the direction of Governor Schwarzenegger, in January 2006, the California Solar Initiative was created by the CPUC in collaboration with the California Energy Commission. The California Solar Initiative is the largest solar program of its kind in any state in the nation and will provide over \$3.35 billion in ratepayer funding over the next 10 years to help California move toward a cleaner energy future and help bring the costs of solar electricity down for California consumers. The goal of the program is to increase the amount of installed solar generating capacity in the state by 3,000 MW by the end of 2016. The California Solar Initiative will be a major source of dependable and environmentally-friendly electricity, and is a major tool in the state's promise to address climate change and meet the Governor's goals to reduce greenhouse gas emissions.

With the recent enactment of SB 1 providing additional direction for the program, all customers served by IOUs and publicly-owned utilities in California will be afforded the opportunity to receive incentives for installing their own solar systems. For customers of IOUs, there will be two programs. The CPUC will be responsible for overseeing incentives to existing residential customers, including affordable housing, and all nonresidential customers. The Energy Commission's NSHP will focus on encouraging

solar installations in the residential new construction market, also including affordable housing. The goal of the NSHP program will be to install 400 MW and 50 percent of new homes with solar by the end of 2016. Both programs are anticipated to be operational January 1, 2007.

The Energy Commission will work with builders and developers to incorporate high levels of energy efficiency and high-performing solar systems to help create a self-sustaining solar market where home buyers demand energy efficient solar homes. The NSHP will specifically target single family, low-income, and multi-family housing markets.

## Emerging Renewables Program Funding Status

Table 9 summarizes Emerging Renewables Program fiscal transactions through June 30, 2006.

**Table 9. Emerging Renewables Program  
Cumulative Funding and Expenditures as of June 30, 2006**

<b>Emerging Renewables Program (\$ Millions)</b>	
<b>Collected Funds</b>	
SB 90	54.000
SB 1038	164.205
Bear Valley Electric	0.062
<b>General Fund Transfers</b>	
From General Fund to provide additional rebate funds pursuant to AB 29X (April 2001)	15.000
To General Fund pursuant to SB 19X - These were unused monies designated for rebates to customers of publicly-owned electric utilities (4th Qtr 2002) <sup>1</sup>	-6.308
<b>Intrafund Reallocations</b>	
From Existing Renewable Facilities to supplement rebate funds pursuant to AB 29X (April 2001)	15.000
From New Renewable Facilities - \$40M for 2nd auction reduced to \$33.8M; \$6.2M difference to Emerging (Sept. 2001)	6.200
From Customer Credit Program for additional rebate funds (Sept. 2001)	10.000
From Existing Renewable Facilities for added rebate dollars (Sept. 2002)	13.000
From RRTF Interest (April 2004)	10.000
From Existing Renewable Facilities (May 2004)	15.000
<b>Total Collected, Transferred and Reallocated</b>	<b>296.159</b>
<b>Disbursements<sup>2</sup></b>	<b>-285.445</b>
<b>Encumbrances<sup>3</sup></b>	<b>-67.862</b>
<b>Intrafund Transfer<sup>4</sup></b>	
Temporary transfer from New Renewable Facilities to Emerging Renewables <sup>5</sup>	60.000
<b>BALANCE<sup>6</sup></b>	<b>2.852</b>

<sup>1</sup> SBX1 19 (Chapter 3, section 53, 1st Extraordinary Session, Statutes of 2003-04).

<sup>2</sup> Does not include \$1,380,162 AGAERA funds paid for Solar Schools Program projects. Cumulative Emerging Renewables Program and AGAERA payments total \$286.8 million.

<sup>3</sup> Does not include \$507,395 AGAERA funds encumbered for Solar Schools Program projects. Cumulative Emerging Renewables Program and AGAERA encumbrances total \$68.4 million.

<sup>4</sup> Pursuant to Public Resources Code Section 25748(f), the Energy Commission is authorized to transfer funds within the areas of the Renewable Resource Trust Fund for cash flow purposes, provided that the balance due each program is restored and that the transfers do not adversely affect any of the programs.

<sup>5</sup> Beginning in January 2005, AB 135 authorized the use of an additional \$60 million of RRTF funds to be collected from 2007 through 2011, and subject to the repayment requirements of PRC section 25751(f).

<sup>6</sup> Because the Emerging Renewables Program can encumber funds that will be collected through 2006, a total of over \$11.9 million remains available for rebates. Balance does not include \$362,444 AGAERA remaining dollars to fund Solar Schools Program projects. Cumulative Emerging Renewables Program and AGAERA balance totals \$12.3 million.

For an itemized list of project descriptions, amount of funding reserved and paid, and energy capacity of all projects awarded rebates during fiscal year 2005-2006, refer to the *2006 Annual Report Appendix, Appendix C*, on the Energy Commission's website at [www.energy.ca.gov/renewables/documents/index.html](http://www.energy.ca.gov/renewables/documents/index.html).

## Existing Renewable Facilities Program

### Summary

The Existing Renewable Facilities Program was initially allocated \$243 million to fund renewable energy facilities in California that began operating before September 26, 1996. At that time, funding in the program was divided into three tiers intended to reflect the degrees of competitiveness of the various renewable energy technologies.

With the passage of SB 1038 in 2002, the Energy Commission modified program eligibility, funding levels, target prices, and caps. The funding for the Existing Renewable Facilities Program was reduced from 45 percent (\$243 million) of the overall Renewable Energy Program funds to 20 percent (about \$135 million) for 2002 through 2006.

The current program is divided into two tiers according to technology, with Tier 1 receiving the larger proportion of funding. Tier 1 includes biomass and solar thermal facilities, and Tier 2 consists of wind facilities. The original Tier 3 technologies, along with one technology formerly in Tier 1 (waste tire), have not been eligible for funding from the Existing Renewable Facilities Program since January 1, 2002. Tier 3 technologies included geothermal, small hydro, digester gas, landfill gas, and municipal solid waste. Table 10 lists the initial funding allocations by tier. Unlike the declining funding allocation for 1998 through 2001, the funding allocation for 2002 through 2006 remains constant.

**Table 10. Original Funding Allocations (\$ millions) by Year<sup>1</sup>**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Overall
<b>Tier 1<sup>2</sup></b>	\$43.20	\$36.45	\$31.05	\$24.30	\$20.25	\$20.25	\$20.25	\$20.25	\$20.25	\$236.25
<b>Tier 2</b>	\$21.60	\$18.90	\$16.20	\$13.50	\$6.75	\$6.75	\$6.75	\$6.75	\$6.75	\$103.95
<b>Tier 3<sup>3</sup></b>	\$12.15	\$10.80	\$8.10	\$6.75	N/A	N/A	N/A	N/A	N/A	\$37.80
<b>All</b>	<b>\$76.95</b>	<b>\$66.15</b>	<b>\$55.35</b>	<b>\$44.55</b>	<b>\$27.00</b>	<b>\$27.00</b>	<b>\$27.00</b>	<b>\$27.00</b>	<b>\$27.00</b>	<b>\$378.00</b>

<sup>1</sup> Collection of funds from 2002 - 2006 is adjusted annually; consequently, the amounts available for Tiers 1 and 2 in 2006 are estimates.

<sup>2</sup> Waste Tire not eligible for funding from 2002 – 2006.

<sup>3</sup> Tier 3 technologies are not eligible for funding from 2002 – 2006.

To be eligible for Existing Renewable Facilities Program funds, a facility must be physically located within California and registered with the Energy Commission as a renewable supplier. Once registered, facilities submit monthly invoices and are paid a cents/kWh incentive for their eligible renewable generation. Payments are based on the lowest of three possible calculations:

- The difference between the “target price” and the market price for energy (the market price may be different for different facilities),
- Available funds divided by total generation submitted (modified to account for differences in market prices), or
- A predetermined cents/kWh cap.

Although SB 1038 did not become effective until January 2003, it allowed retroactive payments for 2002 generation. Of note is the 2002 target price for Tier 1, which was higher than in subsequent years (5.5 cents/kWh vs. 5.37 cents/kWh). The Energy Commission had initially recommended the higher target price to the Legislature, but due to changes in the energy market, it was later determined that the lower target price for Tier 1 was more appropriate. During the 12-month interim, however, most of the facilities had operated on the assumption that the higher target price would prevail. To ensure that these facilities remained operational, the Energy Commission decided to make its 2002 retroactive payments based on the higher target price.

When the Existing Renewable Facilities Program was extended in 2003, the target prices for 2002 to 2006 were increased over those for 1998 through 2001. When the Energy Commission initially adopted the Existing Renewable Facilities Program guidelines, it was determined that the target price and cap would not be adjusted for inflation. However, the Energy Commission decided to periodically review the market price and cap and make adjustments to account for inflation, if appropriate.

In 2005, the California Biomass Energy Alliance requested that the Energy Commission increase the target price and cap for biomass facilities due to escalating diesel fuel prices that were increasing the cost of collecting and transporting biomass residues to the facilities. Because of these increased costs, some of the facilities curtailed generation during periods when the cost of obtaining biomass was greater than the revenues they received. Upon analysis of this request, the Energy Commission adjusted the target price for biomass to 6.17 cents/kWh for November 2005 through April 2006 generation and to 5.87 cents/kWh for May 2006 through June 2006 generation. The Energy Commission also adjusted the cap to 1.5 cents/kWh for November 2005 through June 2006 generation. In June 2006, the Energy Commission extended the 5.87 cents/kWh target price and the 1.5 cents/kWh for biomass through December 31, 2006.

Table 11 shows target prices and caps for the Existing Renewable Facilities Program to date.

**Table 11. Target Prices and Caps (cents/kWh)**

		1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Tier 1</b>	Target Price	5.0	4.5	4.0/5.0 <sup>1</sup>	5.0 <sup>1</sup>	5.5	5.37	5.37	5.37 <sup>2</sup>	5.37 <sup>2</sup>
	Cap	1.5	1.5	1.0	1.0	1.0	1.0	1.0	1.0 <sup>3</sup>	1.0 <sup>3</sup>
<b>Tier 2</b>	Target Price	3.5	3.5	3.5	3.5	3.8	3.8	3.8	3.8	3.8
	Cap	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
<b>Tier 3</b>	Target Price	3.0	3.0	3.0	3.0	N/A	N/A	N/A	N/A	N/A
	Cap	1.0	1.0	1.0	1.0	N/A	N/A	N/A	N/A	N/A

<sup>1</sup> In October 2000, the Energy Commission approved an increase in the target price for Tier 1 facilities from 4.0 to 5.0 cents/kWh, starting with November 2000 generation. This change was made to ensure that biomass facilities stayed on-line through at least the end of 2001 and encourage several other facilities that were off-line at the time to re-start before summer 2001.

<sup>2</sup> The Target Price for Tier 1 biomass **ONLY** will be 6.17 cents/kWh for November 1, 2005 through April 30, 2006 generation, and 5.87 cents/kWh for May 1, 2006 through December 31, 2006 generation.

<sup>3</sup> The Cap for Tier 1 biomass **ONLY** will be 1.5 cents/kWh for November 1, 2005 through December 31, 2006 generation.

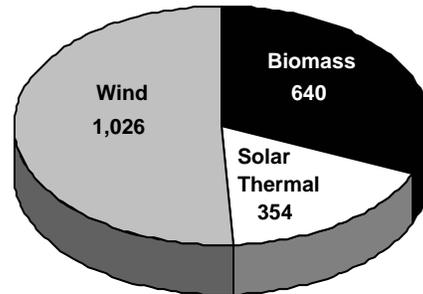
Shortly after the program's January 1998 implementation, 162 renewable generating facilities registered with the Energy Commission as existing renewable suppliers. By December 31, 2001, the number of registered renewable suppliers totaled 378. Of these, the Existing Renewable Facilities Program provided funding support for 273 suppliers, representing 4,400 MW of capacity.

To continue receiving funding, all facilities that were eligible to receive funds from 1998 through 2001 were required to re-register in 2003. As of June 30, 2006, there were 103 suppliers registered and eligible for funding. Because Tier 3 facilities are no longer eligible, the number of suppliers is considerably lower than at the end of 2001. Additionally, at the beginning of 2002, approximately half of the Tier 2 facilities (40 to 50 suppliers) were under contracts with energy prices above the Tier 2 target price and thus have not yet re-registered with the Energy Commission.

## Program Activities and Status

The 103 Existing Renewable Facilities Program facilities currently eligible for funding represent over 2,021 MW of capacity. Figure 4 illustrates the breakdown of all currently eligible capacity by technology.

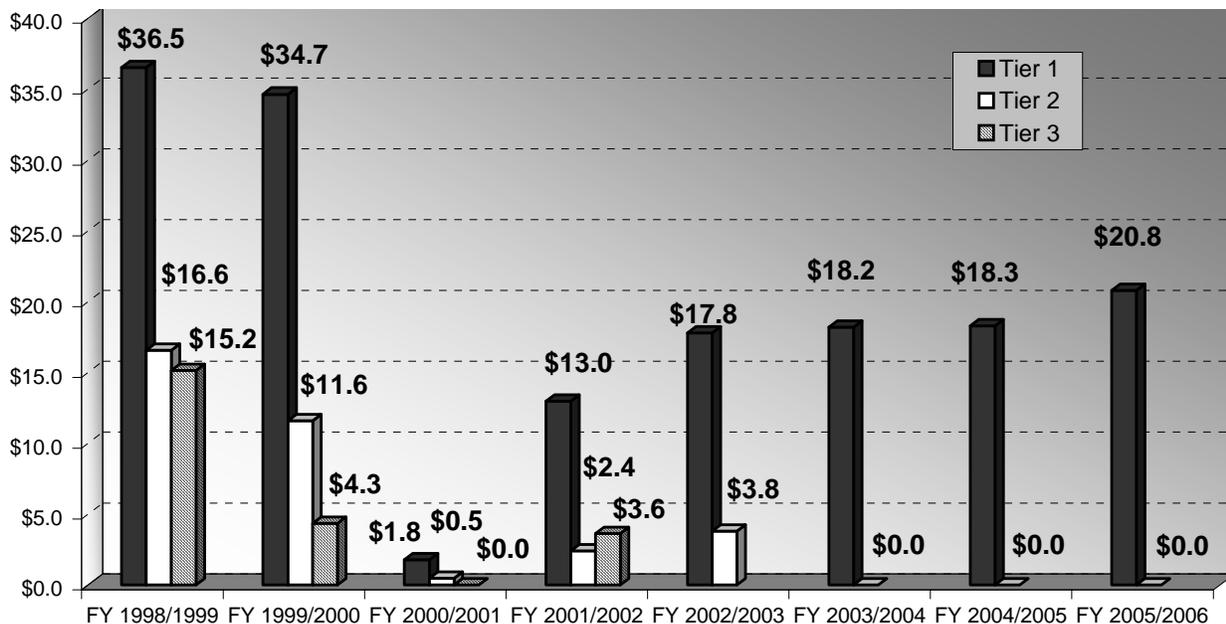
**Figure 4.  
Existing Renewable Facilities  
Program Capacity (MW)**



The Energy Commission distributed the first payments from the Existing Renewable Facilities Program in March 1998. From the beginning of the program through June 30, 2006, the Energy Commission has made payments totaling over \$230.1 million for more than 66,087 GWh of generation from the Existing Renewable Facilities Program. Payments for fiscal year 2005-2006 totaled \$20.8 million on 4,071 GWh of generation submitted.

Figure 5 illustrates the breakdown of payments from Tiers 1, 2, and 3 for the last eight fiscal years. Of special note is the fact that Tier 2 facilities (wind) have been competitive during the past three fiscal years, so they have not required incentives from the Existing Renewable Facilities Program.

**Figure 5. Payments from Existing Renewable Facilities Program  
July 1, 1998 to June 30, 2006  
(\$ millions)**



The 2006 *Annual Report Appendix, Appendix D*, located on the Energy Commission's website at [www.energy.ca.gov/renewables/documents/index.html](http://www.energy.ca.gov/renewables/documents/index.html), provides a project-by-project breakdown of payment and generation for the 2005-2006 fiscal year.

### ***Agriculture-to-Biomass Program***

In September 2003, the Governor signed SB 704, which was designed to improve the air quality in California's agricultural areas by reducing the open-field burning of agricultural fuels. SB 704 required the Energy Commission to allocate \$6 million from the RRTF for incentives to electricity-generating facilities that increased their utilization of qualified agricultural biomass for the 2003-2004 fiscal year. The Agriculture-to-Biomass Program, although not technically a part of the Renewable Energy Program, is discussed in this section because the funding for this program was reallocated from the Existing Renewable Facilities Program.

Funded for one year, the Agriculture-to-Biomass Program provided financial incentives to biomass facilities that purchased and converted these fuels for electricity generation from July 1, 2003, through June 30, 2004. Incentives were paid at a rate of \$10 per green ton of eligible biomass fuel. Nine participants registered their facilities with the Energy Commission for funding. With final payments made in August 2004, total payments from the Agriculture-to-Biomass Program exhausted the \$6.0 million allocation and the program is now concluded.

## **Existing Renewable Facilities Program Funding Status**

Fiscal transactions for the Existing Renewable Facilities Program through June 30, 2006, are summarized in Table 12.

**Table 12. Existing Renewable Facilities Program  
Cumulative Funding and Expenditures as of June 30, 2006**

<b>Existing Renewable Facilities Program (\$ Millions)</b>	
<b>Collected Funds</b>	
SB 90	243.000
SB 1038	123.928
Bear Valley Electric	0.142
<b>Intrafund Reallocations</b>	
To New Renewable Facilities for 2nd auction (Oct. 2000)	-40.000
To Emerging Renewables pursuant to Assembly Bill 29X (April 2001) <sup>1</sup>	-15.000
To Emerging Renewables to respond to growth in demand for rebates (Sept. 2002)	-13.000
To Emerging Renewables to respond to growth in demand for rebates (May 2004)	-15.000
<b>Total Collected and Reallocated</b>	<b>284.070</b>
<b>Disbursements</b>	
Main Existing Renewable Facilities Program	-230.168
Agriculture-to-Biomass Program	-6.000
<b>BALANCE</b>	<b>47.902</b>

<sup>1</sup> ABX1 29 (Kehoe), Chapter 8, Statutes of 2001.

# Consumer Education Program

## Summary

Under SB 1038, the Consumer Education Program was allocated 1 percent of the RRTF, or approximately \$1.35 million per year, to support renewable energy consumer education activities. In April 2003, the Energy Commission subsequently approved reallocating 10 percent of Customer Credit Program funds, or \$1.35 million annually, to the Consumer Education Program after the Customer Credit Program was discontinued. These reallocated dollars are earmarked for funding RPS tracking and verification activities.

The four primary goals of the Consumer Education Program are to:

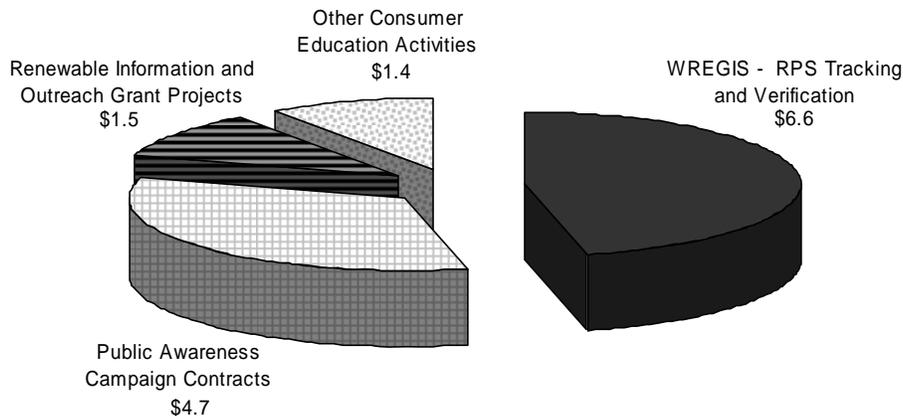
1. Develop information, products and processes that promote the renewable energy market in general, including those that add consumer value to renewable energy by verifying and tracking energy generation and verifying retail product claims;<sup>37</sup>
2. Raise consumer awareness of renewable electricity generation and its benefits;
3. Increase the purchases of small-scale emerging renewable systems installed on customer premises; and
4. Leverage strategic alliances and partnerships with organizations connected to renewable energy in California.

Since 1999, the Consumer Education Program has expended, encumbered, or committed about \$14.2 million to support 3 public awareness campaigns funded through contracts; 21 grant projects awarded for renewable energy information and outreach activities; the development of an electronic tracking system, called the Western Renewable Energy Generation Information System (WREGIS) to address long-term RPS tracking needs; and other Consumer Education activities promoting renewable energy. Figure 6 shows how Consumer Education Program funds have been allocated among activities.

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<sup>37</sup> California Energy Commission, May 2004, *Consumer Education Program Guidebook*, P500-04-003F, [www.energy.ca.gov/renewables/documents/2004-06-09\\_500-04-003F.PDF](http://www.energy.ca.gov/renewables/documents/2004-06-09_500-04-003F.PDF). The May 2004 edition of the *Consumer Education Program Guidebook* added this goal to the Consumer Education Program.

**Figure 6. Consumer Education Program Expenditures, Encumbrances, and Committed Funds (\$ million) as of June 30, 2006**



***Program Activities and Status***

Fiscal year 2005-2006 Consumer Education activities included the following:

- KEMA technical support contract work authorization for \$238,663 to assist with WREGIS development: Expended \$91,173.
- Knowledge Structures, Inc. contract for \$249,250 to continue support of WREGIS activities: Expended \$196,906.
- Enterprise Networking Solutions contract for \$193,200 to procure the services of a Senior Project Manager consultant for the WREGIS project: Expended \$3,737.
- Visionary Integration Professionals contract: Encumbered \$198,000 for the services of a Program Development Project Manager consultant for the WREGIS project.
- Committed \$2.203 million for a contract with the Western Electricity Coordinating Council (WECC) for hosting the WREGIS Administrator staff and administering the WREGIS program.
- Committed \$3.278 million for a contract with APX, Inc., to function as a System Development and Technical Operations contractor. The contractor will modify a base software system for WREGIS requirements and conduct technical operations and maintenance.
- Committed \$55,100 for a contract with Public Sector Consultants to act as the Independent Project Oversight Consultant for the WREGIS Project.
- Committed \$115,200 for a contract with Personal Enterprise, Inc. to perform Quality Assurance and Configuration Management Consultant activities for the WREGIS Project.
- Committed \$1.5 million for the NSHP Public Awareness Campaign Request for Proposal.

- Committed \$110,000 for a California Multiple Award Schedule agreement in support of the \$1.5 million NSHP Public Awareness Campaign.
- Rarus Institute awarded \$50,000 grant in June 2005 to highlight the Solar Decathlon 2005 competition; end date of grant is October 1, 2006. A video of the event was submitted by the grantee and Energy Commission staff is awaiting the completion of the Solar Decathlon book. As of June 30, 2006, no invoices had been received.
- Membership renewal in the California Solar Center for calendar year 2006. Total membership is \$2,500 and is being paid from fiscal year 2006-2007 Consumer Education funds.
- Expended \$1,000 to co-fund Energy Commission participation in the California Building Officials Education Week.
- Encumbered a total of up to \$274,332 for KEMA technical support contract work authorizations for builder/building inspector training programs, developing a solar market, and assistance with the New Homes Solar Partnership. A total of \$93,902<sup>38</sup> has been expended with \$44,570 expended during fiscal year 2005-2006.
- Committed \$240,000 (\$80,000 per year) for the Energy Commission's membership in the Clean Energy States Alliance.
- Updated renewable energy marketing materials for distribution at workshops, conferences, and tradeshow.

These activities are discussed in greater detail below.

### **Renewables Portfolio Standard Tracking and Verification – WREGIS**

The Energy Commission, together with the Western Governors' Association and WECC, continues developing WREGIS, a regional renewable energy registry and tracking system, to address RPS tracking needs. WREGIS is being established to meet the legislative mandate of SB 1078 as follows: Design and implement a tracking and verification system to ensure that renewable energy output is counted only once for the purpose of the RPS and for verifying retail product claims in California or other states.

WREGIS consists of two components: a renewable energy tracking and registry system and its technical infrastructure, and the administrative operations infrastructure and staff to develop and administer the WREGIS Program. The following milestones for the WREGIS project occurred in Fiscal Year 2005-2006:

- Stakeholder Advisory Committee convened in August 2005.
- Request for Proposal for a System Development & Technical Operations Contractor released September 2005.

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<sup>38</sup> This includes \$17,300 contract retention funds paid to XENERGY, the previous technical support contractor for the Renewable Energy Program.

- Interim WREGIS Committee held an election for the permanent WREGIS Committee in November 2005.
- WREGIS Committee convened January 2006.

The WECC Board of Directors adopted a resolution in 2004 that the WECC would act as the institutional home for WREGIS. The WREGIS Administrator will be housed at the WECC and will be overseen by its Executive Officer. One of WECC's responsibilities will be to provide the necessary staff to develop and administer the WREGIS Program. The WREGIS Committee, the governance committee of WREGIS, is a Board Committee of the WECC. The Energy Commission finalized a contract with the WECC to formalize this agreement and define the WECC's roles and responsibilities associated with hosting the WREGIS Administrator and administering the WREGIS program. The contract was awarded in September 2006.

The Institutional Committee finalized recommendations for the governance structure for the WREGIS Committee, estimated the costs associated with WREGIS, and recommended a fee structure for WREGIS users.<sup>39</sup> The governance structure was adopted as part of the WREGIS Charter, which was approved by the WECC Board of Directors in December 2004. Included in the charter was the establishment of the Interim WREGIS Committee, whose main role was to convene the Stakeholder Advisory Committee and conduct elections for the permanent WREGIS Committee.

The Stakeholder Advisory Committee was convened in August 2005. The WREGIS Committee was elected by eligible members of the Stakeholder Advisory Committee in November 2005. The WECC Board of Directors approved the WREGIS Committee at a WECC Board Committee meeting in February 2006.

The WREGIS Committee is comprised of seven members: five elected representatives of industry, states/provinces, generators, and load-serving entities; and three appointed members from the Energy Commission, the Western Governors' Association, and the WECC. The WREGIS Committee convened in January 2006. As outlined in the WREGIS Charter, the mission of the WREGIS Committee is to achieve the goals and oversee the operations of WREGIS in a manner that is fair, credible, consistent with the public interest, and responsive to the needs of participants. The WREGIS Committee provides the governance for the WREGIS Program.

With assistance from its technical support contractor, Knowledge Structures, Inc., the Energy Commission completed a Request for Proposal for a System Development and Technical Operations contractor, which was released by the Department of General Services in September 2005. Final proposals were received in June 2006, and the Energy Commission awarded the contract in August 2006 to APX, Inc. The contractor will modify a base software system for WREGIS requirements, and began work in

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<sup>39</sup> WREGIS Institutional Committee, October 2004, *Phase II Report of the Institutional Committee for the Formation of the Western Renewable Energy Generation Information System*, [www.westgov.org/wieb/wregis/reports/ICPhase2fnl11-3-04.pdf](http://www.westgov.org/wieb/wregis/reports/ICPhase2fnl11-3-04.pdf).

October 2006, in coordination with the activities necessary to establish the administrative operations of WREGIS at the WECC.

The WECC will not incur any costs for housing WREGIS. The Energy Commission will cover costs for the WREGIS Administrator and other WECC costs related to housing WREGIS, which will be funded by the Consumer Education Program. Once it becomes operational, costs of administering WREGIS at the WECC are estimated to be \$2.2 million for a three-year operational phase and a one-year close-out phase. A contract between the Energy Commission and the WECC formalizing this agreement was awarded in fall 2006.

The WREGIS Committee will determine WREGIS fees and a fee structure. The WREGIS program is expected to be self-funded by user fees within three years of operation.

WREGIS development has been procured through several other leveraged procurement agreements. In May 2006, \$193,200 was encumbered for a Senior Project Manager consultant to oversee the WREGIS project; \$3,737 was expended in fiscal year 2005-2006. A Program Development Project Manager consultant began work in June 2006 under a \$198,000 contract to develop the infrastructure at WECC for administering the WREGIS Program. Consultants for Independent Project Oversight and Quality Assurance/ Configuration Management activities with budgets totaling \$170,300 began work in September and October 2006, respectively.

In addition, of the \$238,663 committed for WREGIS activities in the Renewable Energy Program's present technical support contract with KEMA, approximately \$91,173 was expended in fiscal year 2005-2006. During previous years, \$70,293 was expended for WREGIS technical support assistance.

In summary, fiscal year 2005-2006 WREGIS expenditures totaled \$291,816. The Energy Commission estimates that WREGIS will be operational in mid-2007.

Table 13 shows Consumer Education Program funding and expenditures for WREGIS as of June 30, 2006.

**Table 13. WREGIS Cumulative Funding and Expenditures from Consumer Education Program Dollars as of June 30, 2006**

<b>Description</b>	<b>Funding (\$ millions)</b>	<b>Expenditures as of 6/30/2006</b>
APX, Inc., System Development and Technical Operations Contractor	\$3.28	0
Establish and operate WREGIS at the WECC	\$2.20	0
Knowledge Structures, Inc., subject matter experts	\$0.25	\$232,219
KEMA-XENERGY technical support	\$0.07	\$70,293
KEMA technical support	\$0.24	\$91,173
Leveraged Procurement Agreements	\$0.56	\$3,737
<b>TOTAL</b>	<b>\$6.60</b>	<b>\$397,422</b>

During the 2005-2006 fiscal year, the Consumer Education Program funded the following additional activities:

### **Public Awareness Campaigns**

The Energy Commission released a Request for Proposal for the NSHP Public Awareness Campaign on August 7, 2006. The purpose of the Request for Proposal is to solicit proposals from qualified marketing and communication firms with the resources, experience and abilities to provide an array of services that will support the NSHP, encourage the purchase of new solar homes, and help establish a self-sustaining solar homes market. The selected contractor will be expected to develop and present an approach for identifying California consumers most likely to purchase new solar homes, develop a public awareness and marketing campaign and related messages and strategies to reach those consumers, and work with the Energy Commission to implement the campaign, while coordinating activities among various public and private stakeholders. The contractor will also design and implement a method to measure the effectiveness of the campaign to ensure it meets the Energy Commission's objectives and results in increased purchases of new solar homes. Target audiences for the campaign will include new home buyers and builders in California, trade organizations and industry groups, and financial institutions. Campaign-related services will include, but are not limited to, behavioral and social marketing research, public relations advertising, and the development of partnerships with private and public entities such as

production home builders, trade organizations and industry groups, financial institutions, and chambers of commerce.

There is a maximum of \$4.5 million available for the contract with a maximum of \$1.5 million available each year of the program. The first year is a start-up year requiring substantial investment in research and development of the campaign materials. Funds will be allocated to research and develop the campaign, and for campaign implementation, which will include advertising, public relations and collaborative arrangements. The Energy Commission retains the option to extend the contract for up to two additional one-year periods, beginning in 2008 through 2009 and the renewal options will be up to \$1.5 million annually, based on the availability of funds. The allocation amount may be modified in subsequent years as the campaign and NSHP progresses.

In support of the NSHP Public Awareness Campaign, an additional \$110,000 has been committed through a California Multiple Award Schedule agreement. The agreement will contract with a knowledgeable and experienced marketing consultant capable of utilizing their expertise in social marketing campaigns to develop partnerships and assist with the initial stages of developing an effective Public Awareness Campaign that will meet the campaign's goals.

### **Renewable Energy Information and Outreach Grant Projects**

In June 2005, the Energy Commission approved a \$50,000 Solar Decathlon grant project awarded to the Rachus Institute. The project had an associated \$40,000 match fund contribution. The Solar Decathlon, held in 2005, involved competition among colleges and universities from around the globe featuring team-designed and built solar homes, with the designs displayed on the National Mall in Washington, DC. The grants calls for Rachus Institute to develop the educational element of the project—a video and a book—documenting California Polytechnic State University, San Luis Obispo's energy efficient solar-powered home project for the competition. Deliverables were due by October 1, 2006.

### **Other Consumer Education Activities**

- Consumer Education renewed its 2006 annual membership with the California Solar Center for \$2,500. This fee will be paid from fiscal year 2006-2007 Consumer Education Program dollars. The California Solar Center, solely an internet resource, is designed to be a source of information on solar energy activity in California. It provides timely and accurate information to help develop the market for solar energy technology and efficient design practices in California and to assist consumers, businesses, and policy makers move toward a clean energy future without compromising the environment or the economy.

- California Building Officials Education week was co-funded for \$1,000. During October 3-7, 2005 in Concord, California, Energy Commission staff managed a booth and provided handouts and notices of photovoltaic inspection training classes. Staff provided similar support and additional notices of training classes for two subsequent weeks in Ontario and Modesto, California, in October and November, respectively.
- KEMA Technical Support Contract:
  - Builder/Building Inspector Training programs, encumbered up to \$74,848 – This work authorization provided financial support for a series of training programs with expenditures totaling \$42,466. The work authorization was closed out in anticipation of similar NSHP program activities and training/builder outreach programs.
  - Sustainable Solar Market – Up to \$39,678 was encumbered for development of an assessment of a sustainable solar market and report. A total of \$6,095 was expended on preliminary assessment of the market. Additional work was suspended at end of 3<sup>rd</sup> quarter in anticipation of NSHP program activities and training/builder outreach programs.
  - New Solar Homes Partnership – In support of the NSHP, a work authorization for up to \$159,806 has been implemented within the KEMA technical support contract. As of June 30, 2006, a total of \$28,040 had been expended, and an additional \$19,073 had been encumbered, primarily on analysis of incentive levels and trigger mechanisms.
- Clean Energy States Alliance – This contract, approved at the Energy Commission’s August 2, 2006, Business Meeting, commits a total of \$240,000, (\$80,000 per year) for the Energy Commission’s membership in CESA. CESA is an unprecedented multi-state collaboration of clean energy funds that have banded together and pooled resources to expand the use of clean energy across the country by supporting solar, wind, fuel cells and other clean energy projects and companies. At present, there are 18 such state-level funds in 14 states. CESA provides members the opportunity to share best practices, lessons learned, and participate in collective problem solving focused toward effectively implementing their various clean energy programs. Activities involve finding solutions to key, cross-cutting problems that many state members face such as development of the solar PV market, wind facility siting, RPS implementation, biomass development, public education, and other projects. CESA is managed by the Clean Energy Group, a nonprofit organization, and has been in existence since 2003.
- Various marketing materials to optimize consumer awareness about the benefits of renewable energy technologies were developed and updated by the Consumer Education Program. Consumer outreach materials, which can be found on the Energy Commission’s website or by calling the Energy Commission’s Call Center,

include fact sheets, consumer guides, and marketing materials, including many that grant recipients have developed.

For detailed information about Consumer Education activities conducted from July 2005 through June 2006, please see the *2006 Annual Report Appendix, Appendix E*, located on the Energy Commission's website at [www.energy.ca.gov/renewables/documents/index.html](http://www.energy.ca.gov/renewables/documents/index.html).

In summary, fiscal year 2005-2006 Consumer Education expenditures for activities excluding WREGIS are \$93,902. Combined with funding for WREGIS activities, consumer education expenditures for Fiscal Year 2005-2006 total \$386,719.

### ***Consumer Education Program Funding Status***

Consumer Education Program funding and disbursements through June 30, 2006 are summarized in Table 14.

**Table 14. Consumer Education Program  
Cumulative Funding and Expenditures as of June 30, 2006**

<b>Consumer Education Program (\$ Millions)</b>	
<b>Collected Funds</b>	
SB 90	5.400
SB 1038	12.393
Bear Valley Electric	0.005
<b>Total Collected and Reallocated</b>	<b>17.798</b>
<b>Disbursements</b>	-5.454
<b>Encumbrances</b>	-8.732
<b>BALANCE</b>	<b>3.611</b>

## Customer Credit Program

From 1998 through 2003, the Energy Commission used the \$75.6 million initially allocated to the Customer Credit Program to foster market demand for renewable electricity. The funds were distributed via a “credit” to registered renewable providers who delivered eligible renewable energy to qualifying customers. The customer credit, a cents/kWh discount for eligible renewable electricity purchases, allowed providers to offer their products to customers at prices that were competitive with conventional electricity. Providers passed the credit along to their customers.

Since the electricity crisis in 2000 and 2001, changes in California’s electricity market structure affected the Customer Credit Program. In 2001, the CPUC suspended customers’ option for direct access contracting. Furthermore, the advent of the RPS in California suggested that a very different market would soon be in place for electricity consumers and providers. Although customer choice is no longer an option, the RPS will provide an alternative for supporting renewable energy generation that does not require customers to enter into direct access contracts.

As directed by SB 1038, on April 2, 2003, the Energy Commission produced the *Customer Credit Report* for the Governor and the Legislature on how to utilize the customer credit funds most effectively. In the report, the Energy Commission recommended that the Customer Credit Program be discontinued. The report also included recommendations for reallocation of funds, as well as retroactive payments to eligible customers for the period January 1, 2002, through April 2, 2003.

In April 2004, the Energy Commission reallocated a portion of the Customer Credit Program funds to the Emerging Renewables Program and Consumer Education Program (45 percent and 10 percent, respectively) consistent with its recommendations in the *Customer Credit Report* and pursuant to Public Resources Code section 25748, subdivision(b). The Energy Commission subsequently reallocated the remaining 45 percent to the Emerging Renewables Program in May 2004. A final payment in December 2004 concluded Customer Credit activities and the Energy Commission discontinued the program. Cumulative payments made under the Customer Credit Program totaled about \$65 million.

**Customer Credit Program Funding Status**

Table 15 summarizes fiscal transactions for the Customer Credit Program through June 30, 2006.

**Table 15. Customer Credit Program  
Cumulative Funding and Expenditures as of June 30, 2006**

<b>Customer Credit Program (\$ Millions)</b>	
<b>Collected Funds</b>	
SB 90	75.600
SB 1038	0.000
Bear Valley Electric	0.039
<b>Intrafund Reallocations</b>	
To Emerging for additional rebate funds (Sept. 2001)	-10.000
<b>Total Collected and Reallocated</b>	<b>65.639</b>
<b>Disbursements</b>	-65.323
<b>Encumbrances</b>	0.000
<b>BALANCE</b>	<b>0.316</b>

## SECTION III. REALLOCATION OF FUNDS

The Energy Commission is authorized to reallocate funds in the RRTF among programs in a manner consistent with Public Resources Code section 25748(b), which states that,

(b) Money may be reallocated without further legislative action among existing, new, and emerging technologies and consumer-side programs in a manner consistent with the report [*Investing in Renewable Electricity Generation in California*]<sup>40</sup> and with the latest report provided to the Legislature pursuant to this section...

According to section 25748(b), reallocations may not reduce the SB 1038 allocation for the New Renewable Facilities Program nor increase the SB 1038 allocation established for the Existing Renewable Facilities Program.

The next section summarizes the reallocations made during the first four years of the Renewable Energy Program's operation.

### ***1998 through 2001***

From the beginning of the program in 1998 through 2000, there was no need for the Renewable Energy Program to reallocate SB 90 RRTF funds.<sup>41</sup> However, high electricity prices in 2000 and 2001 sharply limited payments from the Existing Renewable Facilities Program and prompted several reallocations among programs, as noted in the *2002 Biennial Report*<sup>42</sup> and discussed below.

As intended by the Legislature, the Energy Commission responded to the energy crisis and its effects on the renewable energy industry by reallocating program funds from undersubscribed programs to those needing increased funding. In an effort to bring new electrical capacity on-line in 2001, the Energy Commission shifted funds from the Existing Renewable Facilities Program to the New Renewable Facilities Program. In October 2000, the Energy Commission reallocated up to \$40 million to the New Renewable Facilities Program for a second auction, and additionally authorized up to \$40 million in the second quarter of 2001 for a third auction. The reallocation of the latter \$40 million did not occur because the additional funding proved unnecessary due to project cancellations, the forfeit of potential bonuses for early on-line dates, and penalties incurred for later on-line dates.

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<sup>40</sup> California Energy Commission, June 2001, *Investing in Renewable Electricity Generation in California*, P500-00-022.

<sup>41</sup> California Energy Commission, May 2000, *2000 Renewable Energy Program Biennial Report*, P500-00-015.

<sup>42</sup> California Energy Commission, May 2002, *2002 Biennial Report*, P500-02-010, [www.energy.ca.gov/reports/2002-06-04\\_500-02-010.PDF](http://www.energy.ca.gov/reports/2002-06-04_500-02-010.PDF).

Of the \$40 million reallocation to the New Renewable Facilities Program to fund the second auction, \$6.2 million was not needed for that purpose, and in September 2001, was subsequently redirected to the Emerging Renewables Program, which was experiencing a rise in demand for rebate funds as a result of high electricity prices and consumer interest in energy independence.

During the First Extraordinary Session in April 2001, AB 29X (Kehoe), Chapter 8, Statutes of 2001, ordered that \$30 million be reallocated to the Emerging Renewables Program – \$15 million to come from the RRTF (the Energy Commission reallocated these monies from the Existing Renewable Facilities Program), and \$15 million from the state's General Fund. The \$30 million was reallocated to the Emerging Renewables Program for additional rebate funds, with a portion set aside for customers of publicly-owned electric utilities. SB 19X (Chesbro), Chapter 3, Statutes of 2003, subsequently directed that the unused monies (about \$6.3 million) designated for rebates to publicly-owned electric utilities' customers be transferred back to the General Fund to help reduce the state's budget deficit.

In September 2001, the Energy Commission also reallocated \$10 million of unused Customer Credit Program funds to the Emerging Renewables Program to further supplement the availability of rebate funds.

The next section discusses fund reallocations from January 2002 through June 30, 2006.

### ***2002 through June 30, 2006***

In September 2002, the Energy Commission reallocated \$13 million from the Existing Renewable Facilities Program to the Emerging Renewables Program to respond to the continuing growth in demand for system rebates.

The Budget Act of 2003, Chapter 157, Section 2.0, Statutes of 2003, directed that the Energy Commission reallocate \$6.0 million from the RRTF for the Agricultural Biomass-to-Energy Program, to be administered under the provisions of SB 704. To accomplish this objective, the Energy Commission reallocated \$6.0 million from the Existing Renewable Facilities Program to the Agriculture-to-Biomass Program to be paid on a \$10 per green ton basis. Nine participants registered their facilities with the Energy Commission for funding and final payments exhausting the \$6.0 million were made in August 2004.

In April 2003, the Energy Commission recommended in its *Customer Credit Report* to the Governor and the Legislature that the Customer Credit Program be discontinued and the funds collected for that program under SB 1038 be reallocated as follows:

- 10 percent to the Consumer Education Program (specifically for the RPS tracking and verification program),
- 45 percent to New Renewable Facilities Program, and
- 45 percent to Emerging Renewables Program.

In May 2004, the Energy Commission reallocated the Customer Credit Program funds to the Emerging Renewables Program and Consumer Education Programs consistent with its *Customer Credit Report* and pursuant to Public Resources Code section 25748(b). However, due to the continuing high demand for rebate funds, the Energy Commission decided to reallocate the remaining 45 percent of Customer Credit funds planned for the New Renewable Facilities Program to the Emerging Renewables Program.

In April 2004, the Energy Commission also approved the reallocation of \$10 million from accrued interest on the RRTF to the Emerging Renewables Program, and in May 2004, \$15 million was reallocated from the Existing Renewable Facilities Program to the Emerging Renewables Program. During fiscal years 2004-2005 and 2005-2006, the Energy Commission did not approve any new reallocations of RRTF dollars.

Table 16 provides a financial summary of the RRTF through June 30, 2006, reflecting cumulative funds collected, disbursed, reallocated, and encumbered since the beginning of the Renewable Energy Program in 1998, and funds loaned and transferred from and within the fund.

**Table 16. Renewable Energy Program  
Cumulative Funding and Expenditures as of June 30, 2006  
(\$ Millions)<sup>43</sup>**

	New Renewable Facilities Program	Emerging Renewables Program	Existing Renewable Facilities Program	Consumer Education Program	Customer Credit Program	PROGRAM TOTAL
Collected Funds <sup>7</sup>	\$481.273	\$218.266	\$367.070	\$17.798	\$75.639	\$1,160.046
Intrafund Reallocations <sup>8</sup>	33.800	77.892	-83.000	0.000	-10.000	18.692
Disbursements	-62.653	-285.445 <sup>2</sup>	-236.168 <sup>6</sup>	-5.454	-65.323	-655.043 <sup>2</sup>
Encumbrances	-119.304 <sup>1</sup>	-67.862 <sup>3</sup>	0.000	-8.732	0.000	-195.898 <sup>3</sup>
Intrafund Transfer <sup>9</sup>	-60.000	60.000				0.00
<b>Program Balance</b>	<b>\$273.117</b>	<b>\$2.852<sup>4,5</sup></b>	<b>\$47.902</b>	<b>\$3.611</b>	<b>\$0.316</b>	<b>\$327.797<sup>5</sup></b>
Loan Balance <sup>10</sup>						-150.000
<b>REP BALANCE<sup>11</sup></b>						<b>\$177.797</b>

<sup>1</sup> New Renewable Facilities Program encumbrances include \$16.281 million in projects awarded funding under the second and third auctions that do not yet have Funding Award Agreements.

<sup>2</sup> Emerging Renewables Program and Renewable Energy Program total disbursements do not include \$1,380,162 AGAERA funds paid for Solar Schools Program projects.

<sup>3</sup> Emerging Renewables Program and Renewable Energy Program total encumbrances do not include \$507,395 AGAERA funds encumbered for Solar Schools Program projects.

<sup>4</sup> Because the Emerging Renewables Program can encumber funds that will be collected through 2006, and \$60 million from 2007 through 2011 (authorized by AB 135) a total of over \$11.9 million remains available for rebates.

<sup>5</sup> Emerging Renewables Program balance and Renewable Energy Program balance do not include \$362,444 AGAERA remaining dollars.

<sup>6</sup> Existing Renewable Facilities Program disbursements include \$6 Million for the Agricultural Biomass-to-Energy Program.

<sup>7</sup> Collected funds include \$406,000 from Bear Valley; they do not include \$20,097 in voluntary contributions.

<sup>8</sup> Intrafund Reallocations include \$10 million transfer from RRTF interest to Emerging Renewables Program and \$8.692 million transfer from state General Fund to Emerging Renewables Program.

<sup>9</sup> Pursuant to Public Resources Code section 25751(f), the Energy Commission is authorized to transfer funds among program accounts in the RRTF for cash flow purposes, provided that the balance due each program account is restored and the transfers do not adversely affect any of the programs. Beginning in January 2005, AB 135 authorized the use of an additional \$60 million of RRTF dollars to be collected from 2007 through 2011, and subject to the repayment requirements of Public Resources Code section 25751(f).

<sup>10</sup> \$150 million loaned to the General Fund pursuant to 2002 Budget Act.

<sup>11</sup> Renewable Energy Program balance does not include \$362,444 AGAERA remaining dollars.

**Note:** Program and REP Balances are committed funds not yet formally assigned to specific projects, but represent monies reserved to meet statutory requirements: Supplemental Energy Payments under the Renewables Portfolio Standard, a renewable energy certificate tracking and registry system (WREGIS), rebates for emerging renewable energy system installations, generation from existing renewable facilities, and consumer education activities.

<sup>43</sup> This table contains data from the Energy Commission's Accounting Office. Accounting data may differ from Renewable Energy Program staff data reported in the table because funds may be returned, credited, or repaid that are not tracked in real time by Renewable Energy Program staff.

The flexibility to reallocate funds has served the Energy Commission, maximizing the benefits of program funds and avoiding inefficiencies. For example, during the early years of the Renewable Energy Program, the Emerging Renewables Program activity showed steady but slow growth. However, since the electricity crisis, consumer demand has soared for solar and wind energy system rebates. The Energy Commission has responded by reallocating funds several times from underutilized programs to the Emerging Renewables Program to supplement funds available for rebates.

Recent Emerging Renewables Program activities and the continued quick depletion of rebate funding are once again prompting a need for reallocation to prevent a major market disruption that would be harmful to the industry and to ensure adequate funding throughout the remainder of 2006.

- True to the Emerging Renewables Program's experience of historical volume spikes when rebate levels drop, the volume of rebate applications dramatically increased in anticipation of a July 1, 2006 drop of rebate level (20 cents/watt for all technologies except for wind systems). Approximately 3,120 reservations were mailed or faxed in the month of June 2006, 2,000 of which were received the last week of June. This compares with an average of 425 per month for the previous five months.
- With the California Solar Initiative set to begin January 2007, the rebate program for PV system retrofits will be transferred from the Energy Commission to the CPUC. Due to customer uncertainty regarding how the CPUC's rebate program will function, the Energy Commission's established Emerging Renewables Program is anticipating an inundation of rebate applications at the end of 2006.

If necessary, the Energy Commission will continue exercising its authority to reallocate funds in response to market changes. This flexibility is particularly valuable to the Renewable Energy Program's efforts towards meeting California's renewable resource goals as the program is poised to award RPS SEPs later this year, implement the New Solar Homes Program as part of the California Solar Initiative beginning in 2007, and launch WREGIS in mid-2007.

If the Energy Commission decides to further reallocate RRTF monies, it will continue to do so with public input and to report on the reallocations to the Legislature.



## **SECTION IV: ACCOUNT TRANSFERS AND REPAYMENTS**

The Energy Commission prepared this section in accordance with Public Resources Code section 25751(f), which provides authorization to the Energy Commission to transfer funds among program accounts of the RRTF (i.e., the New Renewable Facilities Program, Emerging Renewables Program, Existing Renewable Facilities Program, Consumer Education Program, and Customer Credit Program) for cash flow purposes, provided that the balance due each program account is restored and that the transfers do not adversely affect any of the programs.

The Account Transfers and Repayments section covers fiscal year 2005-2006 and responds to the Public Resources Code section 25748(a) directive which states that the Energy Commission shall report to the Legislature on "...The status of account transfers and repayments."

Beginning in January 2005, AB 135 authorized the Emerging Renewables Program's use of an additional \$60 million of RRTF funds to be collected from 2007 through 2011, and subject to the repayment requirements of Public Resources Code section 25751(f). These dollars were temporarily transferred from the New Renewable Facilities Program to the Emerging Renewables Program. The New Renewable Facilities Program was the source of the fund transfer because SEPs disbursements have not yet occurred.

The dollar amount needing to be transferred among program accounts on a quarterly basis fluctuates according to funds collected, disbursed, reallocated, and encumbered, and funds loaned and transferred from and within the RRTF. By June 30, 2006, the RRTF transfer balance was \$60 million.

Transfers and repayments of funds between programs could occur in the upcoming fiscal year and the Energy Commission will discuss any such transfers in its *2007 Annual Report*.



## SECTION V. INTEREST EXPENDITURES

Public Resources Code section 25748 requires the Energy Commission to address the allocation of funds from interest on the RRTF. As noted in the *Overall Program Guidebook* for the Renewable Energy Program, SB 1038 allows interest earned on the RRTF to be used to augment funds for a particular program element at the Energy Commission's discretion. Additionally, such interest may be used to administer the Renewable Energy Program to the extent appropriated by the Legislature and authorized by the Department of Finance.

In fiscal year 2005-2006, interest earned on the RRTF was \$13.8 million for a cumulative total of \$54.7 million as of June 30, 2006. Cumulative expenditures and encumbrances totaled \$21.8 million; reallocations totaled \$10 million; and in fiscal year 2002/2003, earned interest totaling \$5,300,135 was transferred to the General Fund.<sup>44</sup>

In past years, interest funds, like voluntary contributions, were not allocated among the various program elements under the Renewable Energy Program. However, in April 2004, the Energy Commission approved the reallocation of \$10 million in interest funds to the Emerging Renewables Program in response to the progressively higher demand for rebate funds.

Generally, expenditures from the interest accrued are directed to three specific areas, which are described below; dollars include both expenditures and encumbrances for fiscal year 2005-2006:

- **Support Services (\$2,259,990)** – Refers to wages and benefits paid to Energy Commission staff working in the Renewable Energy Program; operating expenses in the form of general office supplies, printing, communications, postage, travel, training, facilities operations, data processing, equipment, and indirect charges.
- **Contractual (\$1,112,926)** – Represents contracts that were expended or encumbered from the RRTF. This expenditure includes contracts for technical services support and student assistance, and a contract with the Department of Finance for auditing services.
- **Pro Rata (\$1,385,084)** – A direct assessment against the RRTF that is applied by the Department of Finance. This assessment is for the cost recovery of expenses incurred by control agencies in the administration of the RRTF. For example, Pro Rata includes the cost of processing claim schedules, journal entries, reports, and payroll for the State Controller, and the work of the Department of Finance budget analyst.

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<sup>44</sup> Budget Act of 2002, Chapter 379, Statutes of 2002.



## **SECTION VI. CONTRIBUTIONS TO THE RENEWABLE RESOURCE TRUST FUND**

SB 1038 directs electrical corporations to allow their customers to make voluntary contributions in support of renewable resource technologies. These contributions are deposited into the RRTF, and under Public Resources Code section 25748(a), the Energy Commission must address their allocation within the context of the Renewable Energy Program. As of June 30, 2006, voluntary contributions totaled \$20,097.

Southern California Water Company (doing business as Bear Valley Electric Service), an IOU, has also made contributions to the RRTF totaling \$406,000. These funds have been allocated to the program accounts according to the percentage allocations stipulated in SB 90, SB 1038, and the reallocations consistent with the Energy Commission's recommendations in its Customer Credit Report pursuant to Public Resources Code section 25748, subdivision(b).



## ACRONYMS

AGAERA	Attorney General's Alternative Energy Retrofit Account
CESA	Clean Energy States Alliance
CPUC	California Public Utilities Commission
GWh	gigawatt hours
IOU	investor-owned utility
kWh	kilowatt hours
MW	megawatts
NSHP	New Solar Homes Partnership
PG&E	Pacific Gas and Electric Company
PV	photovoltaic
RPS	Renewables Portfolio Standard
RRTF	Renewable Resource Trust Fund
SCE	Southern California Edison Company
SDG&E	San Diego Gas and Electric Company
SEPs	supplemental energy payments
WECC	Western Electricity Coordinating Council
WREGIS	Western Renewable Energy Generation Information System